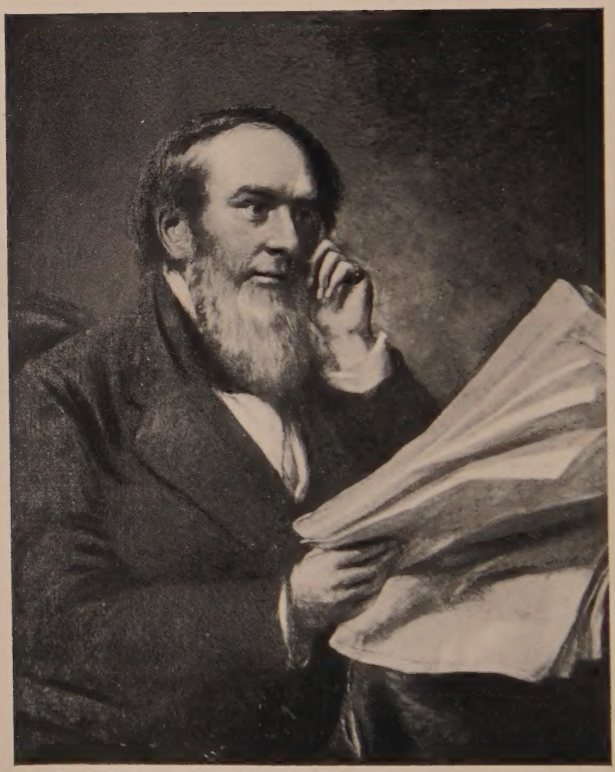
History of the Central High School of Philadelphia



ALEXANDER DALLAS BACHE
Principal, 1839–1842

378 P

History of the Central High School of Philadelphia

By

Franklin Spencer Edmonds, A.M.

Assistant Professor of Political Science, Central High School, and Master of Archives of the Associated Alumni

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TO THE MEMORY
OF
MY FATHER

6 Dec'41K
4 Nov'41P

"*Remember, that the learning of the few is despotism, the learning of the many is liberty; and that intelligent and principled liberty is fame, wisdom, and power.*"—BACON

Preface

No one can study the growth of a great public school, with its struggles,—first for existence and later for independence and support,—without appreciating how closely it has entered into the life of the people. This history is the outgrowth of a sincere desire to record formally the work and the traditions of one of the strong educational influences in the development of Philadelphia. It is offered as a tribute to the long line of honorable and upright men who, under the stimulating leadership of Bache, Hart, Maguire, and Riché, were content to lead the quiet life of the public school teacher. The results of their work are to be found in the careers of their pupils. While in these days no argument for public education is necessary, it is hoped that this account of the work of one school may encourage those who in other places are advocating higher education for all, under the auspices of the state.

I have to acknowledge courteous and ready assistance from many Alumni and others who were interested in the work. As the sources of information were largely personal memories and recollections, it has been deemed wise to give a complete list of those who have helped in the preparation of the work, and whose co-operation is gratefully acknowledged. In the revision of the proofs special aid has been given by William Perrine, Robert Ellis Thompson, the late Samuel B. Huey, George Howard Cliff, and William Clarke Mason, whose suggestions

have diminished materially the errors. Harry Shelmire Hopper, Historian of the Associated Alumni, has been a constant counsellor and a sagacious critic; he commenced the accumulation of the historical material with which I have worked; he formed the collection of portraits of the Faculty with which the volume is illustrated; and by his devotion to the interests of the school he enabled me to understand more completely the loyalty and the affection which the Alumni of the Central High School cherish towards their Alma Mater.

My colleagues of the present Faculty will understand that the brief treatment which is accorded those who have been elected to the Faculty since 1885 is not to be attributed to any lack of appreciation of the good work that has been done in the recent period. But I have felt that an exhaustive discussion of their work can come more appropriately at a later time. It is for the same reason that the collection of the portraits of the Faculty includes only those elected to professorships prior to 1890.

Finally, I have hoped that this record would help the public to understand more fully the aims and ideals with which the "People's College" was founded, and thus win for the school a more complete appreciation of the value of its work to the community that has supported it with abundant good will.

F. S. E.

30th November, 1901.
Central High School, Philadelphia.

Contents

PAGE

CHAPTER I

The Evolution of Public Education in Pennsylvania 7

CHAPTER II

The Establishment of the Central High School 28

CHAPTER III

Bache and his Colleagues 47

CHAPTER IV

The Life and the Work 61

CHAPTER V

The Astronomical Observatory 81

CHAPTER VI

John S. Hart and his Faculty 98

CHAPTER VII

The Hart Administration 123

CHAPTER VIII

Recollections and Reminiscences 158

CHAPTER IX

Nicholas H. Maguire and the Civil War 176

CHAPTER X

The Presidency of George Inman Riché 195

CHAPTER XI

Journalism in the School 228

CHAPTER XII

PAGE

The Student at Play 248

CHAPTER XIII

The Modernization of the School 264

CHAPTER XIV

The Alumni 290

APPENDIX A

List of Officers of the Board of Public Education and Members of the High School Committee 313

APPENDIX B

List of Presidents, Professors, Instructors, and Assistants at the Central High School from 1838 to 1901, arranged alphabetically 319

APPENDIX C

Record of Commencements 350

APPENDIX D

List of Honors conferred at Graduation 357

APPENDIX E

List of Valedictorians 365

APPENDIX F

Army and Navy List 368

APPENDIX G

Courses of Study ..... follow 386

Index 387

Illustrations

PAGE

ALEXANDER DALLAS BACHE ..... *Frontispiece.*

EARLY FRIENDS OF THE CENTRAL HIGH SCHOOL: SAMUEL BRECK, GEORGE SMITH, GEORGE M. JUSTICE, GEORGE M. WHARTON, THOMAS DUNLAP, JESSE R. BURDEN 26

THE FIRST BUILDING 38

JOHN FROST, ENOCH COBB WINES, E. OTIS KENDALL, WILLIAM VOGDES, SEARS COOK WALKER, HENRY MCMURTRIE 42

REMBRANDT PEALE, JOHN SANDERSON, OLIVER ABBOTT SHAW, JOHN C. CRESSON, JAMES C. BOOTH, JOHN F. FRAZER 56

THE HIGH SCHOOL OBSERVATORY 96

JOHN SEELY HART 102

FRANÇOIS A. BRÉGY, HENRY HAVERSTICK, GEORGE J. BECKER, JAMES RHOADS, MARTIN H. BOYÉ, JAMES A. KIRKPATRICK.. 114

THE SECOND BUILDING 142

ALEXANDER J. MACNEILL, FREDERICK A. ROESE, JAMES MCCLUNE, EDWARD W. VOGDES, B. HOWARD RAND, LEWIS ANGELÉ 164

NICHOLAS HARPER MAGUIRE 178

HENRY HARTSHORNE, JOSEPH W. WILSON, JOSEPH B. BEALE, DANIEL W. HOWARD, GEORGE STUART, ISAAC NORRIS 190

GEORGE INMAN RICHÉ 196

JOHN KERN, DAVID W. BARTINE, EDWIN J. HOUSTON, JACOB F. HOLT, GEORGE CORLISS, GEORGE W. SCHOCK 200

MAX STRAUBE, ELIHU THOMSON, SAMUEL MECUTCHEN, FREDERICK F. CHRISTINE, WILLIAM H. GREENE, MONROE B. SNYDER 204

PAGE

The Assembly Hall 220

Henry Leffmann, Andrew J. Morrison, George Howard Cliff, Henry Willis, Albert H. Smyth, William L. Sayre 222

William A. Mason, Oscar C. S. Carter 224

A Corner in the Basement 258

Franklin Taylor 264

Zephaniah Hopper 266

Henry Clark Johnson 268

Robert Ellis Thompson 272

The New Buildings 282

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History of the Central High School

CHAPTER I

THE EVOLUTION OF PUBLIC EDUCATION IN PENNSYLVANIA

THE effort of a free people to provide for the education of their children as a necessity for the maintenance of their political institutions makes a story of interest and of importance. Especially is this true when the movement meets with criticism and opposition, when its leaders are hampered by the absence of any general appreciation of the value of the issue, and when violent prejudice of race, religion, and class is aroused and must be overcome. This was the case in Pennsylvania. While an interest in education may be traced back to the earliest days in the history of the Commonwealth, the establishment of a public school system that should be under the control of the people and for the benefit of all classes of the people did not come until a half-century after the Treaty of Paris had recognized that the American colonies were an independent federation, free to work out their destiny along such lines as the popular will would prescribe.

Within three months after the Declaration of Independence a convention, which assembled at Philadelphia, framed and promulgated the first Constitution of the Commonwealth of Pennsylvania. One of its clauses well expresses the attitude of our Revolutionary forefathers towards public education, as follows:

"SECTION 44. A school or schools shall be established in each county by the Legislature for the convenient instruction of youth, with such salaries to the masters paid by the public as may enable them to instruct youth at low prices: and all useful learning shall be duly encouraged and promoted in one or more universities."

This foundation would not support a free school system, although it suggests the early appreciation of the danger in a system which removed an education from the reach of the people by fees so large as to be prohibitory to many. While the War of the Revolution was in progress, little could be done outside of the mere struggle for existence; but when the victory had been won the interest in education revived, and in the Constitutional Convention of 1790 the fight for free schools was inaugurated.

When the article on education was first reported to the Convention of 1790 it embodied in substance the provision just cited from the earlier Constitution, except that the Legislature was relieved of the obligation to provide for the establishment of schools. Under this article any law establishing free schools, or even a law making the schools free to the poor, would have been unconstitutional. A movement to broaden this provision was at once instituted, led by Colonel Timothy Pickering, a native of Massachusetts who had removed to Pennsylvania and who represented the County of Luzerne in

the Convention. This section of the State belonged to one belt of the Wyoming Valley whose pioneer settlers had come from Connecticut and where schools had been early established under township control. Mr. Pickering introduced in the Convention a resolution that the poor should be educated gratis, and the article which he framed was finally adopted, namely,—

"ARTICLE VII., SECTION 1. The Legislature shall, as soon as conveniently may be, provide, by law, for the establishment of schools throughout the State, in such manner that the poor may be taught gratis.

"SECTION 2. The arts and sciences shall be promoted in one or more seminaries of learning."

This provision was repeated in the Constitution of 1838, and remained unchanged until 1873. Under its authority our system of free and public schools was established. The clause originally authorized free education for the poor only, but the Supreme Court of the Commonwealth decided in 1851 * that it did not forbid the establishment of free schools for all children, rich and poor alike. Mr. Pickering afterwards attained to national eminence; he served as Postmaster-General, Secretary of War, and Secretary of State in the administrations of Washington and Adams; after his return to Massachusetts he was elected to the United States Senate and to the

* Commonwealth *vs.* Hartman, 17 Pa., 118. "It seems to be believed that the last clause of this section is a limitation to the power of the Legislature, and that no law can be constitutional which looks to any other object than that of teaching the poor gratis. The error consists in supposing this to define the maximum of legislative power, while in truth it only fixes the minimum. It enjoins them to do this much, but does not forbid them to do more."

House of Representatives; but not the least among the public services of his distinguished career was his advocacy of a State system of public schools at a time when the idea was too new to be popular and too expensive to be pleasing to his audience.*

In a lecture upon "The Fight for Free Schools in Pennsylvania," the last educational paper of a busy life, Dr. James P. Wickersham, formerly State Superintendent of Public Instruction, thus epitomizes the effect of this constitutional provision upon educational policy:

"For forty years and more this Article continued to be a bone of contention, one party stoutly affirming that it required the Legislature to establish a general system of education, and the other maintaining as stoutly that it only made imperative the duty of providing gratuitous instruction for the poor. Details are impossible in a brief lecture, but there was not a governor's message from 1790 to 1834 in which the question was not brought forward, —not a session of the Legislature in which the opposing forces did not appear in battle array if not actually come to blows,—not a year in which the people did not agitate the subject in public meetings or by means of newspapers or petitions to the Legislature. The friends of a general system were nearly always in a minority; as early as 1794, however, they passed their bill in both houses of the Legislature, but it was lost in a conference committee; and in 1824 their bill became a law, but was repealed two years later, having been so bitterly opposed as to accomplish little good. The reign of the majority is shown in the laws of 1802, 1804, and 1809, setting up what came to be known as 'pauper schools,' schools admitting poor children, but no others, without charge. But defeated one year, the earnest, public-spirited schoolmen next year renewed the fight; as one leader went down another stepped forth to supply his place, and the

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*Among the other friends of education in this Convention may be mentioned Thomas McKean, of Philadelphia, Enoch Edwards, of Philadelphia County, and William Findlay, of Westmoreland.

glorious flag under which they fought was never lowered to the enemy." *

During this half-century of legislative struggle there was carried on in Philadelphia a quiet yet effective work for education under the auspices of various charitable and religious associations. In the year of the Constitutional Convention, 1790, a number of Sunday-schools were established (for instruction in secular as well as religious knowledge) by an association of which Bishop White was president, and in which the leading spirit was Dr. Benjamin Rush. Six years later an association of ladies of the Society of Friends, led by Anna Parrish and Catherine W. Morris, opened a free school for girls, out of which grew "The Society for the Free Instruction of Female Children." In 1799 a free school for boys was established by William Nekeris, Philip Garrett, and Joseph Briggs. At first instruction was given at night by these young men, aided by six others, —apprentices and clerks, who alternately took charge of classes in the ordinary branches of an English education. In 1801 their Society was enlarged and remodelled under the title of "The Philadelphia Society for the Establishment and Support of Charity Schools." In the same year the work of this Society was expanded through an unexpected endowment, obtained from the estate of Christopher Ludwick, "Baker-General of the Continental Army during the Revolutionary War." His will prescribed that his residuary estate should be left to the association which should be first incorporated for the purpose of teaching, gratis, poor children in the city

* The *School Journal*, June, 1891.

or liberties of Philadelphia, without regard to country, extraction, or religion of their parents or friends. There was an honorable rivalry between the infant Society and the trustees of the University of Pennsylvania to obtain this bequest, which culminated in an exciting race to Lancaster between Joseph B. Eves, then president of the Society, and a messenger of the University. The victory depended upon the priority of incorporation, and went to the Society through the strenuous efforts of its president, who rode the sixty-six miles in seven hours, and so established a right to the legacy. The proceeds of this fund, and other bequests of a similar nature, enabled the Society to establish free schools, which continued for many years side by side with the public schools of the city, until, in 1894, after almost a century of noble work, the Society transferred its property to the Board of Public Education and disbanded.*

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* "In the winter of 1799 a few young men were in the habit of assembling on stated evenings for the purpose of social conversation at a public-house. . . . On one of these occasions, tradition relates that William Nekeris came in much later than the prescribed hour, and upon being called to account for his tardy appearance, replied that he had allowed himself to be detained to witness a most praiseworthy effort by some benevolent young women to teach gratuitously poor girls who had no other means of acquiring an education, that their undertaking had greatly interested him, that he could not help thinking that it would be much more creditable to himself and his friends to employ their leisure in the same way in teaching poor boys than to spend it in the indulgence of merely social intercourse. This suggestion appears to have been the first seed from which our flourishing Society and prosperous schools have grown."—Constitution and Laws of the Philadelphia Society for the Establishment and Support of Charity Schools, 1860.

There were many other pioneer attempts at free education, but the interest of this narrative must centre upon the system of schools established under public auspices and maintained by public support.

In 1809 an act of the Legislature established the "pauper" principle in the schools of the Commonwealth, whereby parents who would declare their inability to pay for the schooling of their children could send them to the nearest private school and their fees would be paid from the County Treasury. Neither regulation nor supervision of free schooling was provided, and parents were obliged to place the stigma of pauperism upon their children to obtain the benefit of the act. One year later Governor Simon Snyder directed attention to the need of a general educational system in his annual message, and his suggestion was championed in the House of Representatives by Nicholas Biddle, the eminent financier. A committee, of which Mr. Biddle was chairman, reported in favor of a system of district schools, to be supported partly by taxation and partly by fees, but no legislation resulted.

After the War of 1812-15, during a period of great industrial distress, there was organized in Philadelphia a body of citizens known as "The Pennsylvania Society for the Promotion of Public Economy." Its founders were intelligent citizens, of broad public spirit, and actuated by a sincere desire "to investigate into the present system of public economy, to expose its defects, and to recommend to the public a radical reform, where one is desirable." In order to work effectively it appointed five committees to consider various phases of the public

economy,—viz., the Poor Laws, Public Prisons, Domestic Economy, Suppression of Vice and Immorality, and Public Schools. The reports of these committees, presented on November 10, 1817, form an epoch in the development of Philadelphia. The Committee on Public Schools, of which Roberts Vaux was chairman, reported that the existing plan of public education had been "not only injurious to the character of the rising generation, but a benevolent fraud upon the public bounty." It recommended that the educational system of Lancaster should be established in this city, and as a means to that end introduced an act to be urged for adoption upon the Pennsylvania Legislature.

Joseph Lancaster, whose work was thus commended to the public, was an Englishman, whose name, together with that of Andrew Bell, stands foremost in the list of pioneers in free education. He was born in London in 1778, and at the age of twenty, moved by the pitiable condition of the city children, he opened a school in his father's house, to which many were admitted without charge. "All that will may send their children and have them educated freely; and those who do not wish to have them educated for nothing may pay for it, if they please,"—such was his printed announcement. He developed a plan of monitorial instruction, whereby the older pupils were made teachers of the younger, and thus he was enabled to handle an enormous number of children without other assistance than that which his pupils afforded. About the same time Andrew Bell published the results of a similar experiment in Madras, India. "Give me four-and-twenty children to-day," said Bell, "and I will supply you to-morrow with as many

teachers." "By the aid of monitors," exclaimed Lancaster, "one master can teach one thousand boys." These experiments attracted wide-spread attention, for they came at a time when humanitarians felt the necessity of a systematic scheme of general education, and yet were deterred by the enormous cost. But if schools could be established successfully on the Lancasterian plan, the expense of teaching would be but a slight incident. The report of the Committee on Public Schools, made in Philadelphia in 1817, emphasized this aspect, and claimed, as was eventually accomplished, that three thousand children could be educated at a per capita cost of three dollars per annum!

There was another phase of Lancaster's work which was also attractive to those who had an interest in the public good. He removed from the school-room the petty barbarities which had characterized the tyranny of the eighteenth century pedagogue. To avoid flogging, which he held in great dislike, he invented a series of ingenious punishments, all calculated to cast ridicule on the offender, but not by the infliction of physical pain. "Boys who came to school with dirty faces had them washed before the whole school by little girls, who accompanied the ablution with a gentle box on the ear." While his devices have been superseded long since, his influence in relieving the school-room of the stigma of cruelty was profound.

His school secured for Lancaster the interest of the highest classes of society. The nobility inspected his work, and in 1805 George III. accorded him the honor of a personal interview, in which the royal approval was given to his plan. De Witt Clinton, in an address in

New York City in 1809, publicly commended the monitorial schools, and applauded their founder in these words: "I recognize in Lancaster the benefactor of the human race. I consider his system as creating a new era in education,—as a blessing sent down from heaven to redeem the poor and distressed of this world from the power and dominion of ignorance." With such testimonials the introduction of these schools into America was not long delayed. In 1817 a number of schools were opened on this basis in Philadelphia,—taught by James Edwards, John D. Weston, Abel S. Frood, and Edward Baker. It became the popular "fad" in education, and hence its endorsement by the influential Society for the Promotion of Public Economy was a logical conclusion.

As a result of this agitation, in 1818 the Legislature enacted a law which constituted the County of Philadelphia the First School District of Pennsylvania, and provided for the education of the children of the poor at public expense. The general authority over the schools of the district was vested in a Board of School Controllers, and it was further enacted that "the principles of Lancaster's system of education, in its most improved state, shall be adopted and pursued." Thus was authorized the public school system of our city,—a system which was limited in its operation to the "indigent" class, and was bound to a plan of education whose first virtue was its economy. The Board of School Controllers, appointed in accordance with this act, contained many excellent citizens. Roberts Vaux, who had led in the agitation for the law, was elected president and continued in office until 1831,—the longest term in the

history of public education in Philadelphia. Organization having been effected in April, 1818, schools were at once opened in the four sections over which their authority extended,—viz., City proper, Northern Liberties and Kensington, Southwark, Moyamensing, and Passyunk, and Penn Township. By the end of the year the schools contained two thousand eight hundred and forty-five children, who, under the plan of pupil-teachers, were being educated at a cost of three dollars and fifty-seven cents per capita per annum. Meanwhile Joseph Lancaster had received an invitation to come to America, and early in 1818 had emigrated to New York; but after a few courses of lectures in that city he came to the conclusion that Philadelphia offered a better field for activity, and so removed there. He was cordially welcomed by the School Controllers and was placed in charge of a Model School, to qualify teachers for service in the sections. This school was opened on December 21, 1818; it was situated on Chester Street above Race, in the first building erected by the Board of School Controllers, and hence the oldest public school building in Philadelphia, and the first school for the training of teachers in the United States.

Thus the public school system of Philadelphia was established. But the law under which the first Board of School Controllers worked contained several conspicuous defects, which hampered the growth of the public schools during the next eighteen years. In the first place, the Lancasterian system was established, the main feature of which was an attempt to make the pupils mutually instruct one another. This resulted in economy, but in exceedingly poor teaching. In the second place, the

schools established under the law of 1818 were of one uniform character. There was no gradation of pupils. All were on one dead level; children of five years and learning the alphabet were in the same school with those of fifteen pursuing more advanced studies. It was not until after years of painful and oftentimes unfortunate experience that the method was adopted of grading pupils in accordance with their attainments. Again, the schools contemplated by this law were open only to the children of the indigent. This stigma rendered them essentially odious to the self-respecting poor. As a consequence the Lancasterian schools of this period were not popular, and the early reports of the Board of Controllers are filled with evidence that the system thus instituted had not met with a high degree of public favor.

In 1823, Joseph Lancaster left Philadelphia and went to South America, but his work was taken up by his disciples and the Lancasterian schools still continued. The next step in the development of the system of public education was taken in 1827, when there was organized by a large group of citizens "The Society for the Promotion of Public Schools." One of its most active members was Roberts Vaux, who, as president of the Board of School Controllers, occupied the most conspicuous public position in connection with the school system. In a report presented to this Society in the next year it was pointed out that the radical defect in the then existing system was that "the feelings of the poorer classes will not permit them to enroll themselves as paupers in order that their children may receive their education from the charity of the public," and the report concludes that this pauper school system had been tried

in Pennsylvania, Virginia, South Carolina, and in other States, "and the unvarying result has been a failure, complete, unequivocal." *

This Society undertook to agitate for an extension of the public school law, and with faithful energy and zeal did they devote themselves to this self-imposed task. They opened a correspondence on the subject with the leading men in every county. They secured so far as practicable the aid of the public press, to which they furnished articles concerning the general subject. They prepared memorials to the Legislature and circulated petitions on behalf of a system of public schools. Their work bore fruit in the legislative session of 1833-34. At this period George Wolf was governor of the Commonwealth, a man of good education with a slight experience as a teacher. In his earliest messages he took advanced ground in favor of a system of public schools, and as a result of the message of 1833 the Legislature appointed a Committee of the two Houses for the purpose of considering all matters that pertained to the subject of education. The chairman of this Committee was the Hon. Samuel Breck, a gentleman of the old school and a man of wide culture and liberal training. Mr. Breck was born in Boston, July 17, 1771. He was accustomed to describe to his friends how he had been carried by his nurse to an eminence in order that he might as a child witness the firing on Bunker Hill. He

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* First Report on the State of Education in Pennsylvania, made to The Pennsylvania Societies for the Promotion of Public Schools, April 12, 1828; signed by Roberts Vaux, John Wurts, William P. Davidson, and George W. Smith.

came to Philadelphia in 1792 and lived for thirty years at Sweet Briar, a villa on the Schuylkill. He had served in the upper branch of the Pennsylvania Legislature from 1817 to 1821 and had been later elected to the National House of Representatives. In 1832 he was again elected to the State Senate for the express purpose of aiding in the enactment of a public school law. "He told me," said Dr. Wilmer Worthington, of Chester, who served with him on this Committee on Education, "that he had come to the Legislature for the purpose of using his best efforts to secure the establishment of a system of common schools in the State, and had it not been for this great desideratum in the legislation of the State he would not have accepted a seat in the Senate. When this was done his intention was to decline any further public honors of this kind." In December, 1833, the joint Committee on Schools was appointed, and at once formulated a series of questions which were addressed to the governors of the States where public education was established, asking for information concerning methods of revenue and modes of instruction. The information thus obtained, together with the letters from the governors, was embodied in a report which was read in the Senate January 22, 1834, and which contains an accurate account of the school systems established in the various States. With the report there was introduced "An Act to Establish a General System of Education by Common Schools." As the details of this law were superseded two years later, an examination of its provisions is not essential to this account. Suffice it to say that the proposed bill was enacted with very little opposition, and that the

credit for it must be given in a very large measure to Governor Wolf and Mr. Breck.*

Such is the universal popularity of the public school system to-day that it is difficult for us to realize the tremendous opposition which this law aroused. Pennsylvania had been settled by people of divers nationalities, with peculiar beliefs, creeds, customs, and in some cases with different languages. Schools supported by the public were opposed by many of the wealthy class, who had no sympathy with the doctrine of equality upon which the free schools are founded. Several religious denominations opposed the proposed law, since they were already maintaining at their own expense denominational schools for the purpose of inculcating the precepts of their faith. Many persons of German descent combated the free school idea because the instruction was to be given in the English language, and they feared that it would result in the displacement of their mother-tongue. When the Legislature met in December, 1834, both branches

* A letter from Dr. George Smith, of Media, Delaware County, who served in the Legislature from 1832 to 1836, reads as follows: "The bill reported by the joint committee of 1833-34 was generally regarded as correct in principle, and, as most of the members of either House were alike inexperienced, it was not much discussed, but was passed by an unanimous vote in the Senate and with but one dissenting vote in the House. Samuel Breck, of the Senate, chairman of the joint committee, was undoubtedly the author of the bill. He was a highly educated gentleman, past the meridian of life, who had never mixed much with people living in country districts. Hence we cannot wonder that the main fault of this law, perhaps its only material fault, was the great amount of machinery required to carry it into effect." This letter was written by Dr. Smith in his seventy-ninth year, and was loaned to the author through the courtesy of A. Lewis Smith, Esq.

were flooded with petitions asking for the repeal of the free school law. As ascertained by a committee of the House, thirty-eight counties out of fifty-one sent petitions asking for the repeal of the law, but few petitions were in its favor, and the force of opposition seemed invincible. In March, 1835, an act repealing the law of the preceding year and re-establishing the old system of educating the poor gratis was passed through the Senate. When this bill was taken up in the State House of Representatives, it was amended so as completely to alter its provisions, and, as a substitute for the Senate bill, provisions were introduced not repealing the law of 1834 but removing some of its more material defects. It was in the advocacy of this amended bill that Thaddeus Stevens won great fame. Once more was the Commonwealth of Pennsylvania debtor to a son of New England. Mr. Stevens was born in Vermont and had come to Pennsylvania in 1815. Elected to the Legislature in 1831, he had taken little interest in the school legislation until the crisis of 1835; then he threw himself with ardent zeal into this important contest, and, in an address of wonderful eloquence and power, changed votes by the effectiveness of his argument and so saved the school system.*

At the next session of the Legislature an earnest effort was made to revise the school laws and to mould the system into systematic shape. A joint Committee on Education was again appointed, of which the chairman

*"Stevens's speech was one of the most powerful I have ever heard. The House was electrified. The wavering voted for the House sections, and the whole system was saved from ignominious defeat."—Letter of Dr. George Smith, of Media.

in the Senate was Dr. George Smith, and in the House Mr. Joseph Lawrence. Mr. Lawrence having been elected State Treasurer, the preparation of the bill was placed in the hands of Dr. Smith, who thus describes the legislative progress of the bill:

"The bill was first started in the Senate, where it met with considerable opposition, which was mostly exhibited in the shape of proposed amendments which were of a kind calculated to injure the effectiveness of the bill. One of these came in the shape of a proposed substitute for the whole bill far more complicated than the act of 1834, and this only failed of adoption by a tie vote. In the House the amendments to the bill were very numerous, but the larger proportion were non-concurred in by the Senate, but were adopted after being amended; . . . but for the extra session I doubt whether the school law could have been passed that year."

The act of 1836 formed the basis of the public school system of Pennsylvania. It contained many provisions that are of importance in the organization of school administration, and in the concluding section of the act there were two provisions of especial importance to the city of Philadelphia. By virtue of two provisos of section 23 of the law, the Controllers of the Public Schools for the City of Philadelphia were authorized to establish the Central High School; the section of the law of 1818 which rendered the exclusive use of the Lancasterian system obligatory upon the Controllers was repealed, as were also all provisions limiting the benefit of the public schools to the children of indigent parents. With the origin of the first proviso this history is concerned.

When the bill was reported to the House of Representatives it did not contemplate the establishment of higher schools. In the form in which it had passed the House this proviso is not found, but on June 3, 1836,

when the bill was under consideration in the Senate, the following resolution was offered by Dr. Jesse R. Burden and seconded by Mr. Meek Kelly:

"Amendment to the 26th* section of the bill entitled 'That the Controllers of the Public Schools for the City and County of Philadelphia be, and they hereby are authorized whenever they shall think proper, to establish one Central High School for the full education of such pupils of the public schools of the first school district as may possess the requisite qualifications, and that the monies expended in the establishment and support of the said High School shall be provided and paid in the same manner as now or shall hereafter be directed by law with respect to the other public schools of the said district; and provided further, that so much of the tenth section of the Act of March 3, A.D. eighteen hundred and eighteen, as renders the exclusive use of the Lancasterian system in the first school district obligatory upon the Controllers, and all such provisions (if any) in the said Act and the several supplements thereto as limits the benefits of the said public schools to the children of indigent parents, and so much of any Act hereby altered or supplied, be and the same are hereby repealed, and in the said schools all children over four years of age shall be admitted."

While there was considerable discussion over many of the amendments to this bill, the provisions above quoted seem to have been agreed to without opposition, and on June 13, 1836, the bill became a law by the sanction of Governor Joseph Ritner. Dr. Jesse R. Burden, who, by virtue of his part in the amendment of this law, may be called the father of the Central High School, was a well-known public man in Philadelphia. He was born January 8, 1798, and was graduated from the Medical Department of the University of Pennsylvania in 1819. For many years he was an active political leader, and served in the Legislature continuously from 1827 to

*It became section 23 in conference.

1839. In politics he was identified with Joel B. Sutherland and Judge Edward King. While a stanch Democrat, he differed with Andrew Jackson in his attitude towards the United States Bank, and hence he was one of the few Democrats who voted in the Assembly to charter the bank as a State institution. In later life he was one of the founders of Jefferson Medical College, and he served in other important public capacities, but there was no part of his career that seems to have given him greater satisfaction than his advocacy of public schools.*

The enactment of these provisions met with considerable public favor, although their immediate effect was not foreseen by those who were not in touch with school administration. Perhaps an adequate conception of the delight in some classes upon the abolition of the pauper schools may be given by the following story. It was said by H. C. Hickok that he could remember one of the scholars at the county school on the Juniata in 1834,

"a bare-footed little fellow, some four or five years younger than myself, with patched trousers of poor canvas, who, hearing on the street one day that free schools were to be soon established, exclaimed, 'Oh, I am so glad! for then they won't cast it up to me any more,' and off he ran to tell his widowed mother the good news

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* The *Harrisburg Chronicle* of June 15, 1836, contains an account of a testimonial presented to Dr. Burden by his constituents. In the course of Dr. Burden's acknowledgment he speaks of the work of the Legislature of that year in the following terms: "It had made ample provision for the education of every child in the Commonwealth by the common schools, thus affording the greatest safeguard to political freedom, the sure foundation of virtue, liberty, and independence."

that would remove the stigma from her boy and the sting from her wounded pride." *

After Thomas Dunlap had retired from the presidency of the Board of School Controllers he gave this account of the schools of Philadelphia under the Lancasterian plan. It is a picture of what he found upon entering the Board of Directors of Public Schools in 1824:

"Seven school-houses contained fourteen schools, in each of which about two thousand children were to be educated,— . . . schools where the young idea was to be developed in penmanship by scratching with sticks in the sand-bath, developed into arithmetic by a doleful simultaneous chant of the multiplication table in which neither school, monitor, nor master could detect one intelligible sound, developed into poetry and morals by howling in horrid groans certain doggerel ballads of Lancaster himself. Schools where the baby of five was the all-sufficient teacher of the baby of four, save that the latter if stoutest generally practised more successfully in flogging his monitor than in figuring in his sand-box, and where but too often the master lounged through two or three hours in the morning and as many of the afternoon in gazing down upon the intellectual pandemonium beneath his rostrum, diversifying his educational labors by not infrequently bringing his rattan in as 'thirdsman' between the stout baby and the cowardly baby monitor.

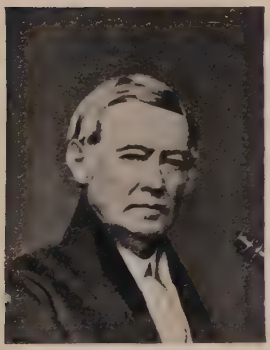
"The only true argument ever advanced in its favor was its cheapness. It was cheap,—very cheap! Sand and rattan were its chief outlay, and on every principle sand and rattan were its chief returns."

One further testimony from those who knew from observation of the early condition of the Philadelphia schools may be of special interest, since the witness was the eminent principal of the Central High School, Dr.

* Annual Address of H. C. Hickok before the State Teachers' Association, 1884. *Pennsylvania School Journal,* August, 1884.

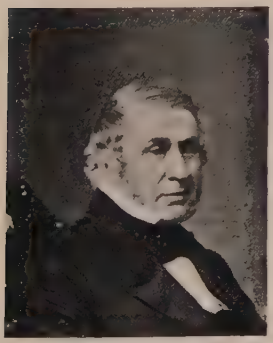
SAMUEL BRECK

GEORGE SMITH

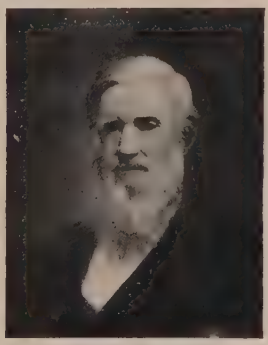


GEORGE M. JUSTICE

GEORGE M. WHARTON



THOMAS DUNLAP



JESSE R. BURDEN

EARLY FRIENDS OF THE CENTRAL HIGH SCHOOL

John S. Hart. In a letter to Mr. Edward Shippen, written in 1867, Dr. Hart says as follows:

"Among the facts which stand out in bold relief in the early history of Philadelphia schools is this: that the plan which was originally adopted, and which was kept up with untiring zeal and courage on the part of its originators for a period of fifteen years, turned out to be at length a complete failure; an absurd mistake from beginning to end; and that the schools made no real progress until a new system, involving an entirely different set of ideas, was introduced.

"Among the five or six gentlemen by whose influence the old Lancasterian pauper system of schools was quietly shelved, and the present system, with all its distinctive features, was inaugurated, was Thomas G. Hollingsworth. His associates in this noiseless but most important revolution were Morton McMichael, Thomas Dunlap, George M. Wharton, and George M. Justice. Their names and his will be found associated in the minutes of the Controllers in every important movement from 1832, when Mr. Dunlap was advanced to the presidency of the Board, to 1840, when the new system had received its complete development.

"During this period the schools were changed from *pauper* schools to common schools, intended to be open to all, and adequate to the wants of all; the idea of teaching by unpaid monitors taken from the scholars themselves was abandoned, and paid assistant teachers were substituted; the plan of employing *very largely* female teachers instead of male teachers was introduced. The schools were classified so as to form a regular gradation and subordination of duties and studies; and lastly, the Central High School was established as the crowning glory of the whole, the worthy apex to a noble pyramid."*

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* This letter was written upon the occasion of the opening of the school which was named "Thomas G. Hollingsworth."

CHAPTER II

THE ESTABLISHMENT OF THE CENTRAL HIGH SCHOOL

WHILE the Central High School of Philadelphia claims the proud distinction of priority in the Middle States, it is not the oldest American public high school. The Boston Latin School, founded in 1635, had accomplished two centuries of useful, well-appreciated work before the movement for higher education had assumed definite shape in Pennsylvania. In 1821 the English Classical School was established in Boston; it did not prepare for college as did the Latin School, but the variety of its studies, together with the emphasis which was laid upon the necessity of preparation for life, makes this school akin in aim and method to the high schools of to-day. Three years after its establishment the name was changed to English High School, a term which seems to have been borrowed from the famous Edinburgh High School, whose tradition dates back to 1519, and whose influence upon American education was profound. Neighboring cities followed the example of Boston in providing higher schools, but nowhere were the foundations laid with broader purpose or with loftier ideals than in Philadelphia.*

* The following extract from a letter of Professor Elmer Ellsworth Brown, of the Department of Pedagogy, University of California, whose work in the history of secondary education in the United States has been characterized by scholarly accuracy, gives the order of the establishment of American high schools:

While New England was leading in its provisions for higher education, an interesting experiment was being tried in New York City, where there was established in 1825 a school that was neither free nor public, and yet gave one more sign of the general desire that the education of the people should not be unduly limited in quantity or inferior in grade. Dr. John Griscom was a scientist of more than local repute. In 1818-19 he travelled extensively in Europe, and in his published account of his tour he described with enthusiasm a visit to the High School of Edinburgh,* then at the acme of its fame,

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"I believe the Central High School of Philadelphia to be the first free public high school established outside of New England. And it would seem to have been more influential in the early high school movement than any of its predecessors in New England, with the exception of the English High School at Boston.

"I find the following ten schools which seem to have been established as high schools in New England before the year 1838:

"1. The English Classical School, now the English High School, Boston, 1821.

"2. The High School for Girls, Boston, 1826. Discontinued, 1828. Re-established, 1852.

"3. The High School, New Bedford, Massachusetts, 1827. Discontinued as a public school, 1829. Re-established, 1837.

"4. The High School, Haverhill, Massachusetts, 1827.

"5. The High School, Burlington, Vermont, 1829.

"6. The High School, Lowell, Massachusetts, 1831.

"7. The High School, Medford, Massachusetts, 1835.

"8. The High School, Augusta, Maine, 1835.

"9. The High School, Brunswick, Maine, 1835.

"10. The High School, Pittston, Maine, 1837."

*"A Year in Europe, comprising a Journal of Observations in England, Scotland, Ireland, France, Switzerland, the North of Italy, and Holland in 1818 and 1819." By John Griscom, LL.D., Professor of Chemistry and Natural Philosophy in the New York Institution.

through the celebrity of its Alumni,—Brougham, Scott, Wedderburn.

He found in the school more than eight hundred scholars, taught by a rector, at that time James Pillans, and four teachers. By the application of the Lancasterian method twenty-three classes, each containing nine boys, were taught by one teacher; "and," said Dr. Griscom, "the noise they make is unavoidably great, but it is the sound of useful activity." Upon Dr. Griscom's return to New York an agitation was started for the purpose of establishing in that city a school upon the model of this famous Scottish High School. A society was organized based upon a stock capitalization, and on March 1, 1825, the school opened with two hundred pupils. Dr. Griscom, associated with D. H. Barnes, A.M., was placed in charge as principal. A graded series of fees, varying from three dollars to seven dollars a quarter, was charged, and a course of study was arranged which provided for all grades of preparation. The first annual report of the trustees of the High School Society in the City of New York showed that the school attained instant popularity. In three months' time the enrollment increased to six hundred and fifty, and the applicants were in excess of the number that could be admitted. The monitorial method of instruction was followed, with the usual result that apparently a great deal was accomplished at very little cost.* So successful was this school in its

* The course of study of this school was as follows: The introductory department, all grades of preparation. Some could not read a letter. Junior department, studies diversified to suit; spelling, writing, arithmetic, geography, elocution, composition, drawing, philosophy, natural history, and bookkeeping. Special

earlier days that in February, 1826, a similar school for females was opened. But this work was not permanent, chiefly because of defective organization, and in 1831 these high schools suspended their sessions.

It could hardly be expected that so interesting an experiment would be tried in New York without leading to results in the neighboring city. Some public-spirited Philadelphians were keenly interested in this educational experiment in New York. If higher education could be made self-sustaining, with a fee so low as to become merely nominal, then certainly one of the important social problems was in a fair way to be solved.

The Historical Society of Pennsylvania contains in its collection a copy of an eight-page letter "To the citizens of the City and County of Philadelphia" issued on April 17, 1826, and signed by James Ronaldson, Paul Beck, Jr., Samuel Breck, Clement C. Biddle, Mathew Carey, Joseph R. Chandler, James Rush, M.D., and eleven others, proposing the establishment of a college for a complete and economical course of education in English literature and the sciences. The letter states the need of some provision for those who are destined to learn trades or mercantile pursuits and who go into active business at from thirteen to sixteen years. The statement of the proposed course of study was as follows:

"It is proposed to commence with the English language, proceed to arithmetic, geography, history of the United States, a compen-

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classes in Latin, Greek, French, and Spanish. Higher mathematics. In experimental philosophy an interesting method was followed. Lectures were alternated with series of questions put and answered by the professor and illustrated by experiments. Then the school was divided into sections of eight, and monitors heard each group recite and recorded their standing.

dium of universal history, bookkeeping, the French, Spanish, and German languages, natural history, chronology, mathematics, natural philosophy, chemistry, mineralogy, perspective, and drawing. Latin and Greek, though not essential parts of the plan, will also be taught to those whose parents or guardians may require them. . . . We appeal to those who have had the education we have described and who have arrived at maturity, to compare the advantages they have derived from the very superficial knowledge of Latin and Greek they have acquired at Grammar Schools, with the advantages which would have accrued from the knowledge of the French alone, to say nothing of the other branches to be taught in the school."

It is extremely interesting to notice that years before the establishment of the High School an answer was made to an argument that has been urged in recent years against the extension of the school's course. Would this college be injurious to the University, is asked, and the objection is dismissed as "wholly ideal, created by the fears of the few who have alarmed themselves and excited groundless fear in others." This project recognized the need of a higher education different from that in the classics which was usually to be found at the established colleges and universities. In the breadth of its curriculum it was most promising, but in its method the subscribers proposed to embody the New York example of opening a college under private management with tuition fees which would be low, on account of the method of monitorial instruction to be employed. No positive developments seem to have grown out of this letter to the citizens of Philadelphia, yet it furnishes one more sign of the great interest in higher education in these earlier days.

In 1828 a "Manual Labor Academy" was instituted in Germantown by a number of prominent men, chiefly

clergymen, for the purpose of connecting manual labor with study by requiring all pupils to work from three to four hours a day at farming or mechanical pursuits. Their work strengthened their bodies and in after-years would help them in attaining a livelihood. The success of this and other experiments led to the insertion of a provision in the school law of 1834 authorizing the establishment of such manual labor schools. In this may be found the germ of an idea which Philadelphia has since developed with great success. The interest of this narrative, however, must centre in the origin of the Central High School, whose establishment was authorized by the school law of 1836, and which was soon provided by the enterprising School Controllers of that period.

Under the energetic leadership of its able president, Thomas Dunlap, the Board of School Controllers had at once prepared to avail itself of the enlarged powers conferred by the new law. There was a general conviction that in order to popularize the public school system, which still suffered from its earlier stigma of pauperism, there must be added an institution which would crown the system, whose courses would furnish an incentive to the diligent pupil to master his elementary work, and through which even well-to-do parents would be led to patronize the schools provided by the State. There were other and equally definite purposes to be served. A public school system had just been founded and a prime need existed for an educated teachership to take up the class-room work. Philadelphia County, prior to consolidation in 1854, contained many schools under a variety of local boards; and while a general supervising authority was

vested in the central board, it was felt that in no way could unity in work and efficiency in administration be better secured than by providing a common goal towards which the graduates of the elementary schools should turn. To enter the High School, a uniform test by examination was to be provided, which would become an effective measure of the work of the lower schools. For all these reasons, therefore, the Board was anxious to proceed to the exercise of its enlarged powers. In May, 1836, a committee was appointed to examine the schools of New York and Boston, with a view to the introduction of new ideas and methods into the system committed to their care. The diary of George M. Justice, a benevolent and altruistic merchant of Philadelphia and a leader in the Society of Friends, tells the story of their inspection. Thomas Dunlap, George M. Justice, Morton McMichael, and Thomas G. Hollingsworth were the members of the Committee. In Boston a pass furnished by the mayor gave them admission to the historic Latin School, the English High School, then fifteen years old, and grammar schools, "whose accomplished teachers," reports Mr. Dunlap, "very cheerfully and courteously furnished all requisite explanations, and afforded perfect facilities for the prosecution of their inquiries."

Some difficulty was experienced in procuring a suitable building for the Central High School, and after much consultation the Controllers decided to erect a new structure, which should be as complete as the primitive conceptions of school architecture of that time could suggest. Such an ideal seemed entirely practical at this time because of an unusual windfall which had just come to

the State finances. In 1836 Congress had authorized the distribution of the surplus revenue of the national Treasury to the States, and the share of Pennsylvania amounted to two million eight hundred and sixty-seven thousand five hundred and fourteen dollars. At first it was intended to keep this money as a school fund, the interest of which should be paid to the various districts; but presently less conservative counsels prevailed, and a portion of the fund was distributed to the several districts and the remainder was used for internal improvements and general expenditures. The entire cost of the first building of the Central High School, together with its equipment and furniture, was about seventy-two thousand dollars, and it was more than met by the appropriations to school purposes made from the surplus revenue. When this source of supply ran dry, as it did after the panic of 1837, the school had been established, and on broad and generous lines; and while there were several political attacks on the ground of waste and extravagance, the instant popularity of the institution enabled it to survive.

With ideals of high usefulness, therefore, and with a well-filled treasury, the Board of School Controllers proceeded with the establishment of the school. In April, 1837, the first High School Committee was appointed, consisting of George M. Wharton, chairman, George M. Justice, Andrew Hooton, and James Carstairs; the latter served for but six months and was succeeded by Thomas G. Hollingsworth—these were the men who had in charge the establishment of the school. The chairman, George M. Wharton, Esq., was an eminent member of a distinguished Philadelphia family, a lawyer of profound

learning, and a man of great force of character.* His colleagues were men of great public spirit, and one of them, George M. Justice, was the prime mover in the establishment of the Astronomical Observatory.

In 1837 a building site for the school was purchased on Juniper Street, facing upon Penn Square, and about midway between Market and Clover Streets,—a location that is to-day in the very heart of Philadelphia and included within the limits of the Wanamaker store. Appropriate plans were prepared for a brick building, with a marble front and a handsome Ionic portico. The building was intended to be an architectural feature of the city. In *The United States Gazette*, of the date of September 26, 1837, there is a letter from an unknown correspondent, "J.," commenting upon the plan of the building as "creditable to the taste of those who projected it."

After the adoption of the plans came the laying of the corner-stone. On Tuesday, September 19, 1837, in the presence of the directors of the various sections and of a great throng of enthusiastic citizens, the ceremony took place. Thomas Dunlap presided, and in appropriate words described the history of the project and the ideals to which the building was devoted. In the corner-stone were deposited coins and paper money of various denominations, the school laws, the reports of the Board

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* George M. Wharton was born in 1806, and died in February, 1876. He was a graduate of the University of Pennsylvania, and served as trustee from 1841 to 1868. In public life he was president of Select Council of Philadelphia, 1856-1859; four times president of the Board of School Controllers, 1840-41, 1847-48, 1850-51, 1853-54; and United States District Attorney from 1857 to 1860.

of Controllers, and other documents appropriate to the occasion. With the rest was a scroll which read:

"This is designed to commemorate the laying of the corner-stone of the Public Central High School of the First School District of Pennsylvania, on the 19th day of September, A.D. 1837—founded by the Board of Control of that District in pursuance of an act of Assembly, passed the 13th day of June, A.D. 1836, Joseph Ritner being Governor of the Commonwealth and Thomas H. Burrowes Secretary of State and Superintendent of Common Schools; and the following persons members of the Board of Control:

"Thomas Dunlap, President,

"T. G. Hollingsworth,	Richard R. Spain,
"George M. Wharton,	Benjamin Martin,
"James Carstairs,	Alexander Wentz,
"George M. Justice,	Henry Leech,
"Andrew Hooton,	John Foulkrod,

"Charles V. Hagner,

"Richard Penn Smith, Secretary."

Little record has been kept of the ceremonies on September 19, and the newspapers of that time are too small in their news space to afford much satisfaction. One interesting side light is cast on the occasion by an address delivered at the Central High School Commencement at Musical Fund Hall on February 12, 1851, by Thomas Dunlap, to whom certainly, next to the liberal spirit of the citizens of Philadelphia, the credit for the establishment of the school must be given. Speaking thirteen years after the school was opened, when its success was an assured fact, Mr. Dunlap indulged in a reminiscence of the laying of the corner-stone:

"At that corner-stone, gentlemen of the Board of Controllers, one of your body" [probably himself] "in a few introductory remarks, ventured expressions of anticipation, which were then questioned and rebuked by his less sanguine associates, for he had said it was his full conviction that before the child he held by the

hand as he spoke should reach the age of manhood the school that day founded would offer as finished and effective a course of education, and be as eagerly sought and as highly prized by all orders and classes in our society, as the oldest and proudest institutions of our land. That child before me has not yet reached to manhood and that prediction is verified, that hope is a reality. You have before you this day that Central High School for whose success its founders on that day uttered these fond aspirations. . . . It is the school of the republic, it is emphatically the school of the people."

Thirteen months were occupied in building, and the structure was completed and ready for use by October, 1838. Imposing in appearance, convenient in its location, and equipped with all the devices that an acute and interested Board could secure, it was one of the prominent buildings of Philadelphia. It was shaped like the letter T, the main structure running east and west with the cross extending north and south. In the angle formed on the south side was the playground, while south of this stood the Pennsylvania State Armory, which fronted on Clover Street and presented a wall of brick surface without windows to the High School playground. This became a favorite spot for the handball games that were so popular in the early days of the school, as the ball could be batted against the bare wall without damage to the property. North of the school building a tavern stood on the corner of Market and Juniper Streets, and the sheds into which the farmers drove their teams on market days stood in the angle of the school building close to its walls. The southwest corner of Thirteenth and Market Streets was afterwards occupied by the Pennsylvania Railroad Company. In those days Thirteenth Street was lined with quiet homes; Clover Street was an alley in

THE FIRST BUILDING, 1838–1854

which the main building was the Armory, while Chestnut Street was the fashionable part of the city, filled with the residences of leading and wealthy citizens. This first building was three stories in height, each floor containing three rooms, which, as there became a demand for more room, were subsequently divided.* The most conspicuous feature of the school building was the Astronomical Observatory, which was destined to give to the school an international reputation, through the earnest and scholarly work of Kendall, Bache, and Walker. †

While the building was in progress the High School Committee was making careful preparations for the opening of the school. It was decided to appoint four members for the Faculty, and the first staff was selected with great care. John Frost, LL.D., was placed at the head of the English and History Department. He was a graduate of Harvard University, a private school principal of experience and reputation, and had conducted a school for young ladies in Philadelphia until 1838. He was a voluminous writer of histories and biographies, and aided by a corps of associates he had published more than three

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* This description has been taken in large measure from an historical sketch of the school prepared by Professor George H. Cliff in 1888, and has been supplemented with the personal recollections of Professor Zephaniah Hopper and other early students of the school.

† In the collections of the Historical Society of Pennsylvania there is a view of the first High School building shown in what is supposed to be the first photograph taken in America. It was taken on a sheet of polished metal, from one of the upper windows of the United States Mint, by Joseph Saxton, on October 16, 1839,—the day after the definite account of Daguerre's process was published in Philadelphia.

hundred popular accounts of noted men in history and of famous events. Enoch C. Wines, A.M., was selected to preside over the Department of Languages. Mr. Wines had been principal of Edgehill School at Princeton, and was thus the first of a line of eminent men who, by coincidence, have aided in identifying the interests of the Central High School and the College of New Jersey. He was a well-known writer and speaker upon educational questions. In 1835 he had edited a magazine entitled *The Monthly Journal of Education,* a paper which after a lapse reappeared in the next year under the editorship of John Frost. He had travelled extensively, and in 1832 published a two-volume description of his travels under the title "Two Years and a Half in the American Navy, the Journal of a Cruise in the Mediterranean and Levant on Board of the United States Frigate Constellation in 1829, 1830, and 1831." This public activity won for him a considerable reputation, and in 1837, when the convention for the framing of a new Constitution for Pennsylvania was in session at Harrisburg, Dr. Wines was invited to deliver a lecture before that body when it had under discussion the article relating to common schools. As soon as he was elected to a professorship in the Central High School he was commissioned by the Controllers to visit Boston and to examine the schools of that city. It is interesting to notice that in his account of this visit, published under the title "A Trip to Boston" over the *nom de plume* of Peter Peregrine, he speaks in the following terms of the teacher who was afterwards so long identified with the management of the Central High School. In describing his visit to Princeton, *en route* for Boston, Dr. Wines says:

"The Edgehill School, now under the care of the Rev. John S. Hart, has its usual number of pupils. The institution has been ten years in operation and always full. The present principal is an accomplished scholar and an able instructor and well deserves the confidence and support of an enlightened public."

In the Department of Mathematics and Astronomy two professors were appointed, Joseph Wharton, A.M., and E. Otis Kendall. Professor Wharton was a graduate of the University of Pennsylvania in the class of 1829. He had been a merchant in Philadelphia and was favorably known to the public. Unfortunately, his death occurred in 1838 before the opening of the Central High School. E. Otis Kendall, whose long service in the scientific field rendered him one of the best known of the early teachers of the Central High School, was born near Boston, May 17, 1818. He was a graduate of the Boston Latin School, and when eighteen years old came to Philadelphia and taught for a time in the school of his half-brother, Sears C. Walker, the eminent astronomer. When only twenty years of age he became Professor of Mathematics and Astronomy at the Central High School, and his work there, together with that of Mr. Walker, forms an important chapter in the scientific history of the school. In the place of Joseph Wharton the Board of Controllers elected William Vogdes, who was at that time an expert accountant in Philadelphia and had served the Board of Controllers in that capacity upon previous occasions. He was born in Philadelphia, December 29, 1802. He was admitted to practise at the Bar of the city in 1832, and four years later was appointed auditor of the county. In 1838 he commenced his career as a teacher in the Department of Mathematics in the Central High

School, so forming a connection that was to be continued by his son for a half-century. In electing this first Faculty the Board of Controllers announced that it was its intention to make additional appointments of the same excellence as the size of the school would require it. The French, German, and Spanish languages were to be taught as soon as the classes were formed.

On October 26, 1838, the building was formally opened, when a class of sixty-three was admitted. These pupils came from the grammar schools of Philadelphia and were of an average age of twelve years and ten months. It is to be noted that the individual ages were unduly varied, extending from ten years (in the cases of Charles M. Cresson, William J. McElroy, and J. Vaughan Merrick) to sixteen years, which was the age of the oldest pupil. It may fairly be assumed that the preparation received in the elementary schools of a system in which there was as yet but little cohesion was as widely varied in its quality.

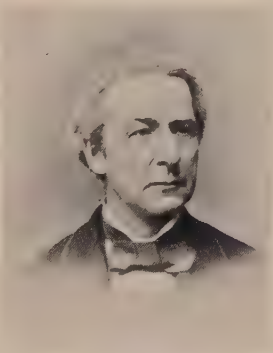
The first name on the roll of the Central High School is that of William M. Abbey.* Many of the members of the First Class attained to distinction in later days. Among the number may be mentioned Dr. Charles M. Cresson, the well-known scientific expert, L. Hall Grandgent, teacher in the English High School of Boston from about 1862 to 1891, George Harding, specialist in patent law, James A. Kirkpatrick, who taught in the school from 1843 to 1868 and was afterwards Superintendent of the City Trusts of Philadelphia, James G. McCollin, secretary of the Mine Hill and Schuylkill Haven Rail-

* The father of the distinguished artist, Henry Abbey.

JOHN FROST

ENOCH COBB WINES

WILLIAM VOGDES



E. OTIS KENDALL

SEARS COOK WALKER

HENRY McMURTRIE

road Company, J. Vaughan Merrick, trustee of the University of Pennsylvania since 1870, and Samuel Mecutchen, who was a member of the Faculty of the High School from 1877 to 1881.

The first teaching of the High School was sound and thorough, but it lacked unity in the curriculum and cohesion in the courses. The plan of its earliest Faculty seems to have contemplated the existence of several departments of study, each independent in its sphere and without definite supervision. In matters of discipline the Faculty acted as a committee, of which Dr. Wines was accounted the chief. As the school increased in popularity, however, and the number of students mounted into the hundreds, the defects of such an organization became apparent. It was fortunate that there was in Philadelphia at that time an educator of distinguished merit who was temporarily without definite work.

Alexander Dallas Bache, the great-grandson of Benjamin Franklin and grandson of Alexander J. Dallas, was born in Philadelphia, July 19, 1806. He was educated at the Classical School in Philadelphia, and at Thomas Watson's school, where one of his classmates was his life friend, Frederick Fraley. At the age of fifteen he entered the United States Military Academy at West Point and graduated in 1825, first in a class that included such distinguished soldiers as General Robert Anderson and General C. F. Smith. It is recorded that he never incurred a demerit during his course at West Point, and the Secretary of War of that time, the Hon. James Barbour, wrote a personal letter of congratulation to his mother upon the distinguished record of her son. He then spent a year as Assistant Professor of Engineer-

ing at West Point, and personally assisted in the construction of government work, such as Fort Adams at Newport. In 1828 he was appointed Professor of Natural Philosophy and Chemistry at the University of Pennsylvania, and thereupon resigned from the army. For eight years he was engaged in this scientific work. As a teacher he acquired great popularity, and in Philadelphia he soon became a leader in scientific work through his activity as a member of the Franklin Institute and the American Philosophical Society and by his papers in the *American Journal of Sciences*. As a scientist he attracted attention by the breadth of his interests; he investigated in the field of terrestrial magnetism; in 1833 he prepared a report for the Franklin Institute on the necessity of a national standard of weights and measures. In the same year he was elected a trustee of Girard College, and thus brought to the counsels of the group of men who had been appointed for the purpose of carrying out the magnificent charity for which Stephen Girard had provided so abundantly a knowledge of education and an experience in organization that could have been found nowhere else in America. In 1836 he was elected president of the College in order that he might lead in the organization of its schools. The next two years, until October, 1838, were spent in Europe examining into the scientific work of the European scholars, and especially into the methods and systems of education used abroad. The result of this tour is the famous " Report on Education in Europe to the Trustees of Girard College for Orphans," which is in many ways an epoch-making document in the history of education in America. Dr. Bache examined two hundred and eighty schools in England, Scotland, Germany, Holland, France,

and Austria, and his published report makes a volume of six hundred and sixty-six pages. It was while upon this tour that Dr. Bache learned for the first time of the establishment of the Central High School. The story may be told in his own words:

"While travelling in Europe in 1837 to procure information in regard to public education and especially to eleemosynary institutions for the Girard College for Orphans, I visited at Munich the great workshops for astronomical instruments established there by Fraunhofer and continued at that time by Merz & Mahler. Mr. Merz inquired if I knew the Justice of the Philadelphia High School who had ordered a large class equatorial telescope and other instruments for the observatory of the institution. Here was truly a surprise. A new institution had sprung up since my departure from home, and with a policy worthy of our city an observatory had been established in connection with it which was to be supplied with instruments of a high grade. The days of Rittenhouse and Lukens and Owen Biddle were to be reinaugurated in connection with a public school. This 'Justice' whom the worthy artist supposed to be some high functionary of the school was George M. Justice, one of the committee of the High School and a leader in this truly commendable enterprise."

Such was Alexander Dallas Bache's first knowledge of the Central High School. It may readily be believed that upon his return to Philadelphia in October, 1838, he made personal inquiry into the institution started under such favorable auspices, and in the autumn of 1839 he proffered his services to the Board of Controllers, offering to aid it without recompense in its plans for the organization of the Central High School.

Note.—In a circular which was issued by a number of citizens of Philadelphia in 1826 proposing subscription to a stock company for the establishment of a college for Philadelphia (see page 31) it is interesting to notice that the memorialists ask what will be the effect of the establishment of the proposed college upon the Uni-

versity of Pennsylvania. Doubtless there were citizens of Philadelphia in 1838 who dreaded lest the establishment of a public school of higher grade should interfere seriously with the prosperity of the University, a fear that has been revived from time to time with propositions for an extension of the course of the Central High School. In this connection may be given the number of graduates from the college of the University in successive years, as cited in the report of Samuel P. Bates to the State Superintendent of Common Schools, reprinted in *The Pennsylvania School Journal,* June, 1863:

1826, 8; 1830, 8; 1831, 20; 1832, 25; 1833, 25; 1834, 14; 1835, 20; 1836, 13; 1837, 18; 1838, 22; 1839, 20; 1840, 15; 1841, 33; 1842, 23; 1843, 29; 1844, 20; 1845, 21; 1846, 29; 1847, 18; 1848, 19; 1849, 19; 1850, 25; 1851, 20; 1852, 21; 1853, 17; 1854, 13; 1855, 20; 1856, 26; 1857, 22; 1858, 16; 1859, 30; 1860, 21.

It will be noticed, therefore, that the University reached a maximum in the number of graduates from the college in the years just after the establishment of the Central High School, and that the average has been maintained constantly.

CHAPTER III

BACHE AND HIS COLLEAGUES

The new principal of the Central High School brought to the responsible post, now intrusted to him, a thorough knowledge of educational methods derived from personal observation and study, and an abiding faith in public education. He realized that the students who entered the school came from a variety of homes with widely differing degrees of culture in their environments. Recognizing that their futures must depend upon their own efforts, he tried to stimulate them to higher thoughts and ideals and thus to fit them for the business of life. The discipline of the school was good and kindly, and was administered with a high appreciation of personal honor. Thus the tradition of West Point was instilled into the early life of the High School. Its results are well attested in the account given by Professor George Davidson of his early days in the school.

The members of the Faculty of this first period were selected by Dr. Bache, and there seems to have been the heartiest co-operation between the High School Committee and himself. As the school increased in numbers through the admission of various classes the necessity for an enlargement of the Faculty became apparent.

In January, 1839, Dr. Henry McMurtrie was appointed Professor of Anatomy, Physiology, and Natural History. This chair he held for twenty-two years, until

increasing years rendered it incumbent upon him to retire. Dr. McMurtrie was born in Philadelphia in 1793. He was graduated from the Medical Department of the University of Pennsylvania in 1814, and was the author of a number of valuable scientific books, including the "Lexicon Scientiarum," a dictionary of terms used in the various branches of science. He was well known to scholars through his translation of Cuvier's "Animal Kingdom," the first English translation of this great scientific work. Its popularity was so great that the doctor was asked to deliver a number of scientific lectures upon the subject. Seven years after its publication he became a member of the Faculty of the High School. The Alumni of the period of his professorship have retained a most kindly recollection of Dr. McMurtrie. A letter from the late Henry Gerhart, of the Third Class, says:

"I rarely walk on City Hall Square without remembering the green trees that grew over the way from the school, or thinking of the men who were instructors of the school in those long-ago days. Among these none stands out more saliently than the rotund form of Dr. McMurtrie with his gold-rimmed glasses, his bluff and hearty manner with its dash of brusquerie. None of his distinguished colleagues put the stamp of potentiality upon himself or their students as did he with his impressive manner, his lucid presentations, and his strict impartiality. I have met many instructors and professional men who have stated that the lectures of Dr. McMurtrie established the trend of their minds."

A correspondent in the Philadelphia *Press* in 1859, writing over the *nom de plume* of "Alumnus," gives an apt and in the main accurate picture of some of the early members of the Faculty. He thus describes Dr. McMurtrie as a teacher:

"Brisk, violent, dogmatical, full of the energy and spirit of a tyrant at the same time that he displayed a hearty love for the welfare and advancement of his pupils. The fear of the most timid was lifted by acquaintance into the most perfect confidence in the kindness and justice of his heart. Before recess he would command silence and rivet the attention of the class, and immediately before he allowed them to pass out he would fling an enthusiasm into their spirits that the hardiest sports of the playground could but scarcely satisfy. He was a great advocate of vigorous and regular exercise, and he could put up with much howling and mischief on the outside of the school if the scholars would but conduct themselves becomingly within. The transparencies used by the doctor to illustrate his lectures are among the best executed we have ever seen. They were painted for him by his son, William, who is an artist of high reputation. In connection with his lectures he also uses his cabinet of human and comparative anatomy, which is arranged so as to display systematically the osseous structure of animals from the radiata to man. The cabinet and the transparencies are the private property of the doctor."

His collections were purchased in 1861 and have since formed the nucleus of the scientific museum in the biological department of the school.

As an illustration of Dr. McMurtrie's method in the class-room the following incident may be given, which was related by Dr. Edward W. Vogdes in a public lecture upon "Educational Fallacies":

"I shall never forget the first anatomical lecture it was my lot to attend. The venerable professor explained the great points of difference between organic and inorganic matter. On the following day the class was summoned to recite, and we were on the tiptoe of anxiety to know how the examination would be conducted. At length our champion was called upon, and as he stood up with a mind full of notions concerning organic and inorganic matter, 'Baldwin,' said the professor, 'what had you for breakfast this morning?' A question so foreign to the one anticipated confused our classmate, but it being repeated, he gazed at the ceiling and replied, 'Catfish, coffee, and hot rolls.' 'Why are you looking at the ceiling?' continued the professor. 'Sir,' said the pupil, 'I was

looking in my mind's eye, and I had my father's breakfast-table. There sits my mother, and beside her my father. I sit on the right. There is a plate of fish, and here the rolls. The steam from the coffee even now arises before me.' 'Ah,' interrupted the professor, 'that is what I want. You are looking at a picture now. You are giving me ideas, not a beggarly array of empty-sounding words. Hereafter when I tell you that twenty-two bones compose the human head and exhibit them to you, form at once a positive living picture which you can recall at any time, just as Baldwin has described his breakfast-table.'"

The testimony of many Alumni would lead to the conclusion that Dr. McMurtrie's instruction resulted in just such clear and definite impressions as he so anxiously desired that his pupils should acquire.

In January, 1840, J. A. Deloutte was elected Professor of the French Language and held that chair until May, 1843. Professor Deloutte was a Frenchman in characteristics as well as in birth. "Alumnus" says of Deloutte:

"In his calmer moods he was most winningly polite and perseveringly agreeable, but when piqued with the obstinate stupidity or impertinence of a pupil his face gradually shuffled off its apparently invincible composure, the slowness and gentleness of his voice assumed a sarcastic depth, and rising deliberately to his feet his body would tower and tremble with his passion in which he would thunder forth exclamations of wounded pride and wild invectives that were terrible to hear but most provokingly laughable to remember. He was extravagantly fond of snuff, but in every other respect he was singularly neat and tasteful. He would excuse a scholar an hour from recitation to remove from his roll an accidental blot or disfigurement. His table was a pattern of tidiness. It troubled him to find a speck upon it, and when taking snuff he would always turn his head away from the table so that not a single grain could fall upon it. Every article had its precise location marked out for it in his mind, and a careful locating of each object was always the first work of the day. Much of his teaching was independent of any class-book, and at all times he was as systematic in his instruction as he was with the arrangement of the articles on his table. In

conducting recitations he had discarded speed and impetuosity and had learned to rely upon the method of repetition and the slow and natural growth of habit. Previous to leaving the High School he edited a small book of fables in French. In May, 1843, he was elected to a professorship in French in Girard College, which position he resigned a few years previous to his death, which, if memory serves me right, took place in 1856."

In February of 1840 an addition was made to the school's curriculum when Rembrandt Peale was elected Professor of Drawing and Writing. Rembrandt Peale, artist and teacher, was born in Bucks County, February 22, 1778, son of Charles Willson Peale, the distinguished portrait-painter. The father, whose portrait of Washington had won for him a national reputation, had peculiar views on the subject of education. The children were not instructed according to any systematic routine, but were left to their own choice in their course of study. Means were furnished to stimulate them to the acquisition of that knowledge towards which their minds were naturally bent. Books, tools, canvas, and pencil, together with the opportunities to see what had been done by others, he thought sufficient, provided there was a disposition to learn. The family contained Rembrandt, the artist, Franklin, the mechanician, and Titian, the naturalist.* When elected to the Faculty of the Central High School Rembrandt Peale had already achieved an international reputation. He had studied in England under Benjamin West. He had visited cities of the continent of Europe to paint portraits of distinguished men. He had had studios in Philadelphia and London. He was president

* See Memoir of Franklin Peale read before the American Philosophical Society, December 16, 1870.

of the American Academy and active among the original members of the Academy of Design. He was one of the first artists to practise lithography in the United States, gaining a silver medal from the Franklin Institute in 1827 for a portrait of Washington. He had written quite a number of books upon natural history, and in 1831 had published "Notes on Italy, written during a Tour in 1829 and 1830." In his old age he commenced his career as a teacher in the Central High School. The course of instruction included the principles of Graphics, which were studied from an elementary book written by Professor Peale during his connection with the school. "Drawing," said he, "the simplest of all arts, is understood by all except the blind, and can be practised even by the deaf and dumb." His students were much impressed with the ability and reputation of this teacher. His appearance counted in his favor. "He is above medium height, well proportioned, and he has a face which bespeaks warmth and animation, though it is lighted up beneath a halo of snow, which, with a Jacksonian elevation in front, is a symbol of the straight up and down character of the man." Those of his students who entered into scientific work must certainly have found his instruction of direct use, in the added facility in representing one's ideas by diagram, and certainly all must have been helped by the two mottoes which were put upon successive editions of the text-book which he wrote, —"Try," and then, "Nothing is denied to well-directed industry." Professor Peale resigned from the Central High School in October, 1844, and lived in quiet retirement in Philadelphia until his death, October 3, 1860.

When the development of the school required an ex-

tension in the department of Greek and Latin, Dr. Bache turned naturally to his own teacher, John Sanderson, who was elected a member of the High School Faculty, as Professor of Greek and Latin and assistant in the department of English and Belles-Lettres, in September, 1840. He was already famous as a scholar. Professor Sanderson was born in 1783 near Carlisle, Pennsylvania. He was educated by a private tutor and had studied law in Philadelphia before becoming a teacher; subsequently he was assistant principal of Clermont Academy. He wrote extensively for the *Knickerbocker Magazine, Portfolio,* and *Aurora.* In 1820, with his brother, James H. Sanderson, he published the first two volumes of the "Biography of the Signers of the Declaration of Independence," which was completed in seven volumes a few years later. In 1833 he gave up teaching and settled for a while at Pottsville and then travelled abroad, spending several months in Paris. This led him to write a series of descriptive articles, which were collected under the title "Sketches of Paris," a book which was so well received that it was translated into French and finally retranslated into English, and so published in London under the title "The American in Paris." He also wrote portions of the work entitled "The American in London," which appeared in the *Knickerbocker Magazine.* At the period when classical education seemed beyond the reach of the students who attended the public schools, he wrote a number of pamphlets arguing in favor of classical studies, of which the best known was signed "Riberjot," and attacked the plan of excluding the classical languages from the curriculum of Girard College. His teaching in the High School was singularly successful.

His mind was brimming with kind and polished wit, and it appeared to be his especial delight while mingling with the aims and sympathies of youth to elevate their tone and to leave an impress that would gratify or beautify for life. His method of instruction in the classics was rapid and full, at the same time that it was masterly and minute; but the branch in which he displayed the most originality and ability was the grammar of our own language, which he was led to study through his duties at the High School. At the time of his death he had in course of preparation a book on the origin and structure of the English language. The following is an example of his conversational method of teaching, given by "Alumnus":

"'What is a definition?' 'That which defines the object and excludes everything else.'

"'If I say that a tailor is a person who makes men's apparel, is it a good definition?' 'No, because a shoemaker might say that he makes men's apparel, and that therefore he must be a tailor.'

"'Plato's definition of a man was, that he was a two-legged animal without feathers. Diogenes stripped a chicken of its feathers and threw it into Plato's school, saying, "There is Plato's man," and according to his definition it really was.'

"'Aristotle has called poetry an imitative art, and the moderns have given that as his definition. Is it a good one?' 'No, because other arts are imitative. The manufacture of currycombs is an imitative art. What would the manufacture of currycombs be, according to Plato? Poetry!'

"Thus would he multiply illustrations on the main idea, interesting by his allusions and fixing by his repetitions, so that the quickest were still progressing and the dullest were not left behind."

Professor Sanderson's services at the High School continued until his death, which occurred April 5, 1844. His death was reported to the American Philosophical

Society by John S. Hart, who spoke of him in the following words:

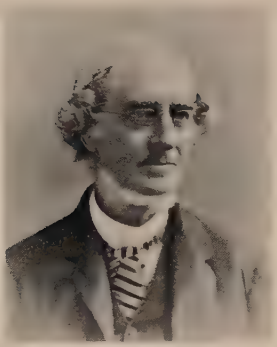
"That which chiefly distinguished him as a writer was his power of observation and delineation. He had in consequence a remarkable talent for that species of writing which consists in giving vivid sketches of passing characters and events. Our published literature contains few more readable books than his 'American in Paris.' His mind was a perennial fountain of wit, sparkling, buoyant, and playful, of that laughter-loving kind which never failed to produce hilarity as it was never known to provoke resentment. He was a man eminently devoid of guile or malice. Simple in manners and address and almost childlike in his feeling, he won from those who knew him, and particularly his pupils, something higher and holier than respect. He was beloved. He had a kindliness of disposition which always found its way to the heart."

In October of 1841 Professor Wines resigned the chair of Mental, Moral, and Political Science. As he left Philadelphia shortly after this, his honorable career during the thirty-eight years of life that still remained to him does not come within the scope of this record. Suffice it to say that he became interested in the study of penology, and he devoted his life to the promotion of reform in the administration of criminal law and in the conduct of penal institutions throughout the world. His work at the Central High School was taken up by Oliver A. Shaw, A.M.

Professor Shaw was born in Salem, Massachusetts, in 1799. At an early age he was left dependent on his own exertions, and as a result of his hard work he obtained his Bachelor's degree at Harvard and his Master's degree at Yale. He taught school in Virginia and afterwards at Gulf Mills, near Philadelphia. His connection with the Central High School lasted not quite two years.

His course of instruction included elementary principles of morals, with lessons on the relations of pupils and teachers, children, parents and guardians. He taught enthusiastically, working independently of class-books. "Alumnus" records that his excessive kindness allowed encroachments upon his prerogatives as a professor, but his heart was always warm and he was well esteemed by the students. His resignation was presented in July, 1843, after which he studied for the ministry, taking orders in the Episcopal Church. After a few years he went to the South and lived there during the remainder of his life. He was a man of some eccentricities. It was his idea that it was a sin against natural law for one to cut his hair, and for some years he allowed that and his beard to grow at will, and in consequence his appearance caused some comment. He died at Yazoo City, Mississippi, in 1855.

The final organization of the course of study was completed in January, 1842, when John C. Cresson and James C. Booth were elected to chairs in the scientific department. Professor Cresson was born in Philadelphia in 1806 and was educated at the Friends' Academy. His earlier interests were in agriculture and later in business; his greatest reputation was won in the field of civil engineering, and for twenty-eight years he was superintendent and engineer of the Philadelphia Gas Works. In 1837 he was elected to the chair of Mechanics and Natural Philosophy in the Franklin Institute, and from this position he was naturally promoted to the Central High School. He remained scarcely long enough to make his mark upon the school. He gave but one lecture or conducted but one recitation each school day. There was very little provision for illustrative apparatus



JAMES C. BOOTH

JOHN F. FRAZER

JOHN SANDERSON

OLIVER ABBOTT SHAW

REMBRANDT PEALE

JOHN C. CRESSON

in the field of natural philosophy, but Professor Cresson willingly sacrificed time and money in making his course as thorough and practical as possible. He was much esteemed as teacher and man. His son, Dr. Charles M. Cresson, was a student in the First Class of the Central High School.

James C. Booth, chemist, was born in Philadelphia July 28, 1810, and was graduated from the University of Pennsylvania in 1829. He then prepared at Rensselaer Polytechnic Institute and afterwards went to Germany, where he studied chemistry under Wöhler, being the first American student in analytical chemistry to venture into Germany. He worked for some time under Magnus in Berlin, then in Vienna, and afterwards in England. In 1836 he established a laboratory in Philadelphia, the first of its kind in the United States for instruction in chemical analysis and chemistry applied to the arts. A course under Dr. Booth was at one time considered essential to those who studied chemistry, and many of his pupils have won scientific reputations. About the same time he became Professor of Chemistry at Franklin Institute and continued his lectures during several years. In the Central High School his course included lectures upon the general principles of chemistry, organic and inorganic, and analysis. There was no laboratory for the students at this time and illustrative apparatus was painfully scarce. Professor Booth had little to say to the pupils outside of his subject; he entered the school to instruct, not to please; and as a consequence his influence was most felt by those whose scientific predilections he could discover, and whose tendencies he did much to encourage. He resigned from the Central High

School in November, 1845, and four years later was appointed refiner of the United States Mint at Philadelphia, a position which he retained for more than thirty years until his death in 1888.

The last of Dr. Bache's appointments is the only survivor of this famous group,—George J. Becker, whose connection with the Central High School covers the period from 1842 to 1853. Professor Becker is a German in nativity, but his life has been devoted to the teaching of the business arts in the land of his adoption. In January, 1842, he was appointed assistant to Professor Peale, and two years later, upon the resignation of his superior, he was elected to the professorship of Drawing, Writing, and Bookkeeping. Rembrandt Peale's forte was painting; that of his successor was penmanship. "Never have we beheld a more neat or skilful writer at work," records "Alumnus."

"With a clean page and a carefully selected pen, he would dash off flourishes, ornaments, and figures with a freedom that an engraver might vainly attempt to counterfeit, and with a beauty that he could not excel. He issued a system comprising ten books, which are now familiar to most of the scholars in Philadelphia and to many in the United States. In his system, the letter 'o' is pointed at the top in all of its combinations; the loops of letters are well proportioned; in the 'm' and 'n', only the last descending stroke is made heavy; the angles at the turning-points are not very acute; a peculiar 'x' is made by connecting a direct and an inverted 'i'; and the convenient German 't' is insisted upon."

Professor Becker's work at the High School was thoroughly appreciated by the students, and in many cases he gave to them that acquaintance with business practice that afterwards proved of such great value to the graduate in securing first employment. He resigned

in April, 1853, to accept the chair of Drawing and Bookkeeping at Girard College, and there he taught for forty-three years; in 1896, however, he was retired from active service with full pay, and his life has since been spent in comfortable and honorable rest.

Such was the group of able and distinguished men who, brought together under the leadership of Alexander Dallas Bache, now devoted themselves with singular efficiency to the teacher's life. A Faculty so strong in scholarship and so devoted in spirit at once gave tone to the institution. Perhaps the most important single reason for the early popularity of the school was the culture and ability of its teachers. Few institutions in the land of the same grade could equal this young public school in power; certainly none could surpass it. As a result, these early years form a period of triumph and of progress. The school drew from all classes of society; the ambitious among the pupils were spurred on by the view of a goal which it was so worth while to attain; the well-to-do began to recognize that the hitherto despised public schools afforded advantages not to be obtained at private academies; and so a spirit of loyalty to public education gradually permeated public opinion.

The utmost harmony prevailed in the internal government of the school. The powerful personality of the principal, together with that "singular abnegation of self" which, in the view of his friend, Professor Joseph Henry, was the secret of his influence over others, gave to the Faculty a unity of purpose that was most helpful in its effect on the life of the institution. Seventeen years after leaving the school Professor Bache paid the following tribute to his colleagues:

"How rise before me the forms of those who then filled the professors' chairs! The charming classical mind of John Sanderson, so enthusiastic in the beauties of his author, so eloquent in expatiating, so varied in information, so gentle, so affable, a wit so keen, and yet a heart so relenting! He had been my own beloved preceptor in earlier years, and it was a source of intense gratification thus to have offered him the niche to which he was exactly fitted, and which had been his life-long search. The 'American in Paris' would, I thought, have made an admirable instructor in French, but his modesty forbade his entering upon instruction in a foreign language. The laborious, philosophical, analytical instruction in French of Professor Deloutte, how it rises with all its peculiarities before me now! and well do his old pupils around me remember him and it and those magical tables of white and red, covering the walls of his class-room and from which he taught and lectured. These men are gone to their rest, and we may speak freely of them. Shall I not also do the same of that venerable doctor (McMurtrie) who, learned in his sciences, thought it no derogation to bring them down to uses of common life; whose kindness of heart carried away his pupils, removing the barrier which a sternness of manner sought to erect for discipline's sake? The quiet, classical, elegant turn given to his instruction by Professor Frost. The systematic and yet original and developing character of the teaching of Professor Wines; the ardent, enthusiastic, artist-like, philosophical aims of Rembrandt Peale, who, the inventor of a new system, found here his first 'large-scale' experimental field for its demonstration. The quiet, philosophical, thorough method of Professor Kendall; the patient, practical grounding of Professor Vogdes; the brilliant scientific expositions of Professor Frazer; the systematic and practical chemical teaching of Professor Booth. I see these men as in the magic mirror of the past, and hear their teachings in the never-dying waves of the air, moved by their voices.

"It was the early dawn of the school, but was already quite light." *

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* Address of Alexander Dallas Bache before the Alumni Association of the Central High School, delivered February 10, 1859.

CHAPTER IV

THE LIFE AND THE WORK

The educational history of the High School commences with Dr. Bache's report to the High School Committee, which was presented December 10, 1839. Previous to this keen analysis of the function of the school there had been competent instruction, but there was no complete grasp of the situation. Bache was fresh from his European investigation, where he had been favorably impressed with the Prussian system, by which boys intended for the learned professions are educated in the classical courses of the "Gymnasia," while those intended for business life pass the corresponding period in the study of science and modern languages in the "Real Schools." He submitted to the Philadelphia Committee a sketch of the Leipsic system, and pointed out that just as our public schools supplied the place of the elementary schools abroad, so our High School should correspond to the "Gymnasia" and the "Real Schools." It should prepare one group for the University, where they would enter upon professional study; it should prepare another group for active business life. That these functions are of the highest usefulness is apparent, but Bache broadened the popular conception of education so as to include moral and physical education as well as the training of the mind.

With this general discussion of the aims and ideals of the school he prefaced the specific recommendations which were to change entirely its organization. His supplementary report, as preserved in the old minute-book of the Faculty, is given in full:

PLAN OF ORGANIZATION OF THE CENTRAL HIGH SCHOOL.

There shall be three courses of instruction in the Central High School, one principal and two subsidiary; the Principal Course shall embrace the following subjects:

A. Language. 1. English Language, etc., as at present taught, retaining for this department the title now in use of "English Belles-Lettres."

2. French and Spanish; the former to be obligatory upon all the pupils attending the Principal Course; the two languages to be taught by the same Professor.

B. Geography and History. To be united for the present with the department of English Belles-Lettres.

C. Mathematics. 1. Lower Mathematics, including Arithmetic, Algebra, Geometry, and Trigonometry, with their applications.

2. Higher Mathematics, including Higher Algebra, Analytical and Descriptive Geometry, and their applications.

D. Mechanical and Natural Philosophy; their elementary principles and applications. To be taught by the Professor of the Higher Mathematics, to whom also the direction of the Observatory is, for the present, to be confided.

E. Natural History, to include Natural Theology and the precepts of Health (Hygiene).

F. Morals and the Evidences of Christianity, Mental and Political Science, to be taught, for the present, by the Professor of the Classics.

G. Writing. } To be, at least for the present, united in one
H. Drawing. } department.

The two subsidiary courses, to be entitled respectively the Elementary and the Classical Courses, shall consist of the following branches:

First, for the Elementary Course:

A. English Language.
B. Geography and History.
C. Lower Mathematics.
D. Elements of Mechanics and Natural Philosophy.
E. Elements of Natural History.
F. Moral Lessons.
G. Writing.
H. Drawing.

Second, for the Classical Course:

A. Language. 1. Latin and Greek.
2. English Belles-Lettres.
3. French, as far as may prove consistent with due progress in classical and the English studies.
B. Geography and History.
C. Mathematics. To include the Lower Mathematics and as much of the Higher as may be practicable.
D. Elements of Mechanics and Natural Philosophy.
E. Natural History.
F. Moral Lessons.
G. Writing.
H. Drawing.

The duration of the Principal Course and the Classical Course shall each be four years, and of the Elementary Course two years, and parents are expected to make the selection of one or the other course for their sons on admission to the school. Provided, however, that any parent shall be at liberty to change his decision at the expiration of half a year.

The duties of the Professors appointed shall be in conformity with the distribution of studies made in the foregoing; and in addition there shall be appointed a Professor of the French and Spanish Languages and a Professor of Drawing and Writing.

The school year shall be divided into two terms, a Winter and a Summer Term, the first beginning on the first of September and ending on the twenty-fourth of December; the second beginning on the third of January and ending on the fifteenth of July. Provided that if the first of September or the third of January fall on a Sunday, the term shall begin on the following Monday, and if

the twenty-fourth of December or the fifteenth of July fall on Sunday, the term shall end on the preceding Saturday.

At the close of each term there shall be an examination of the pupils of the High School, the one in December to be in the presence of the parents of the pupils, of the Controllers, and of the Instructors in the School; the other in July to be public.

There shall be twice in each year at the opening of the term an examination for admission into the High School, of which due public notice will be given.

To be admitted into the High School, a candidate must be twelve years of age, have passed at least six months in one of the Public Schools of the First School District of Pennsylvania, and show on examination that he is able to read, write, and spell correctly, has a competent knowledge of, and understands the English language, Rules of Arithmetic to proportions inclusive.

The vacations shall consist of the intervals between the terms heretofore fixed, and such other holidays as may by rule be given in the Public Schools of this District.

The Officers of the School shall consist of a Principal, Professors and Masters, and a Janitor, whose duties shall be fixed by the Committee on the High School.

The Principal and Professors and Masters shall meet from time to time as a Board to inform themselves of the progress and character of the pupils in the several rooms, to consult in regard to improvement in their courses or discipline, and to consider such cases of discipline as may be submitted to them.

The Principal of the School shall have authority to convene this Board, and to serve as the medium of communication with the Committee of Control.

Each Professor is considered as responsible for the discipline and due progress of the pupils in his department, subject to the Rules of the Committee of Control.

The Principal is charged with the inspection of the School, and it is his duty to make to the Professors or the Masters or to the Committee such suggestions in regard to the studies, discipline, and general welfare of the establishment as may seem to him to be necessary or expedient.

The Principal shall make a report to the Committee twice every year at the close of each term relative to the condition of the High School, and embodying such suggestions for its improvement as may appear desirable. The Principal is considered as replacing

the Committee in regard to the internal management of the School, when they are not in session.

The Committee of Control have full authority to make all rules and regulations relating to the High School, not conflicting with the foregoing, and to alter them at pleasure.

The foregoing plan of organization having been presented to the Board of Controllers, it was unanimously approved, and Dr. Bache was authorized to undertake the task.

The curriculum was then organized with three courses of study.

The Principal Course was the most popular, and it was elected by almost two-thirds of the students. It corresponded to the German "Real School" in that it was designed to prepare boys for trade, commerce, and business.

The Elementary Course was recommended to those who, from necessity, could afford but two years for higher education. The number of students who pursued this course was never very great; in Professor Hart's administration it was abolished as a separate course, and in its place a partial-course certificate was substituted, conferred upon those who had completed at least two years, but who were not able to finish the entire course.

The Classical Course gave instruction in Greek and Latin in place of the modern languages. Hence it was designed to prepare for college or for professional studies at a university.

The curriculum contained two significant features,—it was unusually strong along the lines of natural science and mathematics, and there was provision for the teaching of two modern languages,—French and Spanish.

The first has characterized the course of study down to the present time, and may be ascribed to Dr. Bache's intense appreciation of the value of a scientific education. The study of Spanish * has equal significance, and is one of the first indications of a recognition of the trade relations of the United States to Central and South America. Professor Davidson recalls that Dr. Bache's educational ideal was formed in large measure by his experience at West Point, and that his desire was for a school equal to the Military Academy in all points " pertaining to a thoroughly practical education."

If the High School owes a debt to West Point for its course of study, equally great is the obligation for the system of discipline, by which, with slight changes, the school was governed until 1890. There is only one way to correct delinquencies in the minor details of conduct, and that is by providing an adequate and reasonable penalty for each act of misconduct. This is the chief problem in school discipline. For a grave offence or serious moral obliquity, expulsion or an appeal to the parent is usually an appropriate punishment. For trifles, a personal rebuke or an admonition is usually sufficient. But between these two extremes come a great series of school misdemeanors, which cannot be passed over in silence or the result is detrimental to character. Suspension or expulsion is too serious, a rebuke gradually loses its effectiveness, and yet if some penalty is not prescribed the pupil becomes confirmed in careless habits. To meet these cases, Dr. Bache introduced from

* Spanish was dropped from the curriculum in 1854, but has recently been replaced in the commercial course (1898).

West Point the system of demerits, whereby petty offences were punished by demerit "marks," to be imposed by professor or principal. These marks were reported to the principal, and were carefully noted in records, which became later the famous "Black Books." Where the total was on the increase, the pupil was sent for by Dr. Bache, who in his kindly earnest way would point out the evils of a continued indifference to school laws. Reports of demerits, as well as of recitation marks, were sent to parents, and for the latter the standard of 10 was selected by Dr. Bache in preference to 5, which was the basis during the first year. As much as possible a sense of personal honor was encouraged, and many details of school life were committed to the students for supervision. Thus, at one time, a monitorial system was established, and the older and more thoughtful boys were placed in charge of the stairways, the playground, etc. In June, 1842, the superintendent of monitors was one whose name is known to three generations of High School Alumni,—Zephaniah Hopper.

The old Faculty minute-book contains a careful record of the life of the school, and from its ancient pages the following incident of discipline is gleaned. Six boys were charged "with causing snuff to be distributed in school for the purpose of creating disorder and confusion." They were given a hearing before the Faculty, —no condemnation without an opportunity for defence, —and then their testimony was reduced to writing. The next day, when there had been ample opportunity for grave reflection upon the matter, which possibly involved the futures of a number of young men, the Faculty again assembled, and, in the cases in which there had been dis-

ingenuousness or deceit, recommended to the Committee on High School that the students should be dismissed. Surely nothing more just in procedure could be devised.

The Faculty meetings were held on Saturday at the noon hour, and were well attended. The routine business was the examination of the rolls of the school, to see whether any students were falling below the standard for work. Occasionally parents would be requested to withdraw their sons from school, as they were not earnest in their studies. Sometimes special cases were considered. Andrew Mason should have been admitted with the Fifth Class in January, but he was several months under twelve years, and so, reluctantly, the Faculty asked his father to withdraw him for a term. In these early days educational problems were frequently referred to the Faculty for its consideration. In January, 1842, the chairman of the Committee on Education of the Legislature of Pennsylvania wrote to Dr. Bache requesting the opinion of the "Board of Instructors" upon certain questions concerning text-books and course of study for the common schools. The letter was referred to a committee,* whose report was a complete discussion of the work of the elementary schools.

The patrons of the school were well satisfied with its management. By reports to them, by special letters, and by his courteous readiness to give information at all times the principal won their confidence and respect, and this reacted in the support which they gave to the school and its teachers in their homes and before the

* A. D. Bache, John Sanderson, and William Vogdes.

public. When a student entered the school the principal sent a letter to his father describing the courses which the school could give; when he entered A, as the highest division has always been called, another letter was sent, inquiring as to the probable line of life-work which he would pursue, so that the studies for senior year might be so arranged as best to contribute to his future career. At regular times public examinations were held, and the parents were invited to witness the exercises. All these plans resulted in an increase of popular favor, which was intensified when those who had at first opposed higher education as too costly noticed the care with which the school's executive watched every expenditure, thus continually reducing the per capita cost.

From its inception the school exerted a powerful influence upon the educational system of the city. In 1841, Dr. Bache was asked to assume the general superintendence of the schools of the city, and during his year of service in this field he did much to harmonize the system. In October, 1840, he presented to the Board of Controllers a report on the "Organization of a High School for Girls and a Seminary for Female Teachers," and while this object was not instantly achieved, his clear and lucid argument formed a powerful weapon in the hands of Hon. James Campbell and other advocates of higher education for women. The elementary schools gradually improved in character with the incentive which the semi-annual examination for admission to the High School furnished. In October, 1838, but forty-five per cent. of those applying passed the examination successfully, but in four years the ratio had risen to seventy-two per cent.

The entrance examination was conducted with a single view to impartiality. "All the candidates were received at the one time, and to each a ticket was given, bearing a number upon it, to which the applicant answered during the examination, and by which his qualifications were recorded." Oral and written tests were required, and the standing of each group of candidates from each grammar school was published in the annual report of the Board of Controllers. To be admitted was a very great honor, and correspondingly great was the sting of defeat. And over all, superintending, advising, guiding, was the genius of Alexander Dallas Bache, who, with the public spirit and zeal that have proved characteristic of his family, devoted his wonderful talents to the achievement of a notable result. Perhaps the greatest gift that the High School could give to its pupils in these early days was that of acquaintance with this master-spirit. "There hung about the motions of his large body," said "Alumnus," "a smooth and persuading courage, which made him the acknowledged master of his professors and pupils the moment he appeared. He was a healthy and hearty lover of life, and the constant cheerfulness with which he moved through the dull routine of the roster, coupled with the broad, perpetual humor in his countenance, indicated that he was a natural lover of his kind, and that he was of the true stamp to be a beloved leader of the young."

Dr. Bache's administration at the High School lasted until the opening of the fall term in 1842, and his last important official act was to preside at the first Commencement on July 15, 1842. It was a simple and yet impressive occasion. The students assembled in the

lecture-room of the school, and the members of the Board of School Controllers were seated on the platform. An essay upon "The Public School System of Pennsylvania" was read by James G. McCollin; a valedictory address was read by Clinton Gillingham, and was responded to by E. K. Smith, on behalf of the remaining pupils of the school. George M. Wharton, Esq., chairman of the High School Committee of the Board, then presented certificates of graduation to twenty-five students who had completed the four years' course and to one who had completed the elementary course. He reminded them that, "as they were the first fruits of the institution, its character for usefulness would be estimated in a great measure by the manner in which they should conduct themselves in after-life." After an address by the principal, the exercises were concluded, but the graduates met immediately afterwards and formed the first Alumni Association.

Mr. Wharton's admonition did not fall on heedless ears, and if the character of the High School is to be judged by its first fruits, it may well rejoice at the test.

The first graduating class contained three prospective members of the High School Faculty: Zephaniah Hopper, whose continuous service in the school from 1854 to the present has crowned him as the Nestor of the teachership in Philadelphia; James A. Kirkpatrick, for a quarter of a century a faithful and efficient teacher in the High School and afterwards prominent in the business life of Philadelphia; and Samuel Mecutchen, a member of the Faculty from 1877 to 1881, and later a textbook writer and publisher. The first honor was awarded

to L. Hall Grandgent,* who became a teacher in the English High School of Boston, winning his appointment in a competitive examination against several graduates of Harvard. Two others of the class entered the teachership, Charles Bowman becoming principal of the Southeastern School, and Clinton Gillingham, who held a similar position in the Friends' School. As representative of the majority of the class, whose inclinations and circumstances led them into business pursuits, may be mentioned James G. McCollin, who became secretary of the Mine Hill and Schuylkill Haven Railroad Company; Joseph S. Ruth, who entered the service of the United States Coast Survey, and who was drowned in the pursuit of his duty at the mouth of Columbia River; George S. McMurtrie, son of the "Doctor," who studied medicine, but afterwards also followed Dr. Bache into the United States Coast Survey.

Within a few weeks of the Commencement Dr. Bache notified the High School Committee of his intention to return to his University work, and on September 21, 1842,

* "I first became acquainted with Mr. L. Hall Grandgent in the year 1874, when I entered the school service of this city as head-master of the English High School. He was then, and for the remainder of his life continued to be, the master in charge of the class in the head-master's room of that school. This position was assigned him because of his pre-eminent scholarship. He was one of the two most scholarly men I have ever known connected with the schools of Boston. He was always studying when not teaching, and thus adding to his great store of useful information. He was veritably a walking encyclopædia. He was, moreover, a man of most lovable disposition. The boys were always very fond of him. He fell sick while travelling in Europe, and died there September 13, 1891."—Edwin P. Seaver, Superintendent of Schools, Boston.

his connection with the High School ceased. His after-career belongs to the scientific history of America. He returned to the University of Pennsylvania and reassumed the professorship of Natural Philosophy and Chemistry. In November, 1843, he was appointed Superintendent of the United States Coast Survey, and thenceforth for more than twenty years he labored with unceasing energy for the completion of a work that has added untold millions to the commercial wealth of the nation. Many High School graduates went into that service with their former principal, and their testimony is unanimous that his interest in the educational system he had done so much to establish never abated until his death, February 17, 1867.

To the Alumni of the school his memory is very precious,—an inspiring teacher, an eminent scholar, a sagacious friend.

To complete an account of the Central High School during this first administration some description of the student life of the school is necessary. One of the most distinguished of the early Alumni, Professor George Davidson, of the University of California,* has prepared the following account of various phases of the school organization. It is peculiarly appropriate that these paragraphs should come from one who was a pupil of Bache and later his assistant and friend:

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* George Davidson was graduated from the Central High School in July, 1845, with the Sixth Class. He served in the United States Coast Survey from 1845 to 1895, having been for many years in charge of the Pacific Coast Survey. He has published over one hundred and thirty works, and has served on several government commissions of the highest importance.

"LOYALTY OF THE STUDENTS AND GRADUATES OF THE CENTRAL HIGH SCHOOL.

"There were several pronounced species of loyalty among the students, marked somewhat by degrees of intensity.

"1. The loyalty of all students to the High School itself, as an institution peculiarly appertaining to the people, and part of the common school system, in contradistinction to the University of Pennsylvania, which was acknowledged its superior but belonged to the richer classes.

"This loyalty was very strong, and it reached into every grammar school and among the teachers. Our ambition in the grammar schools was to be able to enter the High School.

"In distant countries, and on the Pacific to-day, every 'High School boy' greets another with the warm-hearted feeling of brotherhood. The particular class is forgotten in their devotion to their Alma Mater.

"2. Loyalty to the special class as against all other classes in the school. A desire to have the class surpass the other classes in scholarly standing, and in athletic exercises, such as were practised in the large area between the United States Arsenal and the school building. There were never any formal interclass struggles. There was never any phase of hazing in the class: nor were any attacks or tricks played upon any other class. There was never the least destruction of property about the High School building, either in books, chemicals, or apparatus.

"Our class worked off its surplus steam by dividing into two contending bodies for the regular games of the day. One side was generally led by George Gideon, later engineer in the United States navy, and the other side by myself. In the last year or two we had no time to attend to athletics.

"We parted at graduation without a stain of ill-will among the members, and our reunions are those of a strong brotherhood. In the early days of California eight High School boys—mostly of 'Old E'—dined together in San Francisco before parting for all quarters of the earth.

"3. Loyalty to the professors individually and as a body. I never heard of any disrespect manifested towards a professor; on the contrary, the student never hesitated to appeal to the professor, feeling that he would receive justice and sound advice.

"In after-life it has been a refreshing delight to hear a body of High School boys recounting the lovable and admirable traits

of the professors. Each and every one could recall some special act of kindness, or some generous help in advice or more substantial assistance.

"I myself am moved to the depths of my soul at the recollection of their exceeding great kindness towards me. And my lifelong classmates, James S. Lawson* and Elwood Evans,† who served so many years upon this Western coast, never spoke of any of our professors except with the love and admiration which young men absorb from contact with learned, noble, and devoted teachers.

"4. Loyalty to Principal Bache was quiet but strong, and was exhibited in many ways.

"PROFESSOR BACHE AND HIS KINDNESS TOWARDS STUDENTS.

"Professor Bache was a graduate of West Point and served in the Corps of Engineers in the construction of Fort Adams at Newport.

"He left the army for civil life and was appointed President or Director of Girard College when in the course of erection. By the Board of Directors he was sent to Europe to study and report upon a system of education for that institution. That brought him into personal acquaintance with many learned men of Europe. Long before the Girard College was opened he was elected principal of the Central High School by the Board of Controllers from its organization in 1838. His tastes and his recent experiences peculiarly fitted him for the position, and he entered upon the duties with enthusiasm. He had the faculty of gaining the friendship and support of men, and of winning the confidence of young people. I never forgot my being called up by him in the last day of our entrance examinations and told that I had passed. And he won me by adding that as I was above the average age (sixteen), he would look to me to assist him by example in urging the younger students to gentlemanly conduct and studious habits. The kind words and the kindly smile remain clearly in my memory.

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* James S. Lawson served in the Pacific Coast Survey from 1850 to 1893. He, with Davidson and Harrisson (High School Alumni) and John R. Rockwell (a Yale Alumnus), was assigned to the Pacific service in 1850 by Dr. Bache.

† Afterwards judge and lieutenant-governor of Washington Territory.

"I suspect that he had a kind word for all, and certainly I never heard him use a harsh word, nor was he ever charged with so doing.

"Of his methods, the following incident will indicate his plan of action. One winter day the furnaces were well charged with red pepper. The culprit was apparently never discovered. We missed the quietest and most reserved fellow in our class, but we never suspected that he had anything to do with the red-hot dose all classes got. Some years afterwards when in camp Superintendent Bache asked me about my classmates and what had become of X. I could not give him any information on that point. Then Bache related how he had fallen upon the culprit within an hour; that he had sent quietly for him; that he had confessed and declared he had no colleague. It was our classmate. Bache talked earnestly to him in a fatherly manner, dismissed him and conjured him to brace up and not blast his life. That was the first time Bache had ever mentioned the incident, and he said he often wondered what had become of him.

"I have no doubt whatever that Bache gave many an earnest lesson to whomsoever was lacking in moral rectitude or was negligent in study; and he saved a man's self-esteem by an appeal to his better nature and by not making his delinquencies public.

"SOME PERSONAL AND OFFICIAL RELATIONS WITH PROFESSOR BACHE.

"I enter into some personalities merely to show that I was in a position to know much of Professor Bache's character and his devotion to the High School, and to indicate that coming at once into public service I was able to judge of the standing of Bache and the earlier standing of the institution. I entered the High School in June, 1841, and from the third month to graduation stood at the head of 'Old E,' as we lovingly called that class. Professor Alexander Dallas Bache was principal. Some time in 1842 or perhaps early in 1843 he resigned to accept a professorship in the University of Pennsylvania. (I have often thought with the prospect of becoming Provost.) In November, 1842, he employed two or three students of the Central High School as observers at Girard College Magnetic Observatory to watch for meteors. . . . I was one of the observers and made reports.

"In preparing his illustrations for his lectures on Physics at the University of Pennsylvania he employed me to make large drawings. This work I performed at his residence on Chestnut Street,

and I worked from 3 P.M. to 8 or 9 P.M. every day for several months. Of course I was still at the High School.

"He then sent me to the Observatory as one of the night observers from 12.30 to 8.30 A.M. But the hours were too long and the pay too little, so that shortly afterwards I observed from 4.30 to 8.30 and had general direction over the night work. I was responsible for the discipline and accuracy of the observers.

"December 12, 1843, Professor Bache was appointed to the superintendency of the United States Coast Survey by the President of the United States. All the correspondence relating to his application and letters of recommendation was copied by me for filing among his papers.

"In 1844 he wanted me to enter the Coast Survey as his secretary and computer; but I desired to graduate next year, and so he promised me a position for that year. I continued at school and at the same time earned my living as observer and also computer at the Magnetic Observatory. The computing I did at home. (In these years I had to walk nine or ten miles daily, because I lived in East Kensington.)

"Upon graduation I joined Professor Bache's field party as clerk, computer, and magnetic observer, and thenceforward was in almost hourly contact with him, and always recording for his daily hours of observation.

"At the end of a year I chose to go into the field as an observer, because, as he said, that was in the line of promotion. Thence to 1850 I was with some one of the older officers on field duty during the winter in the South, and in the summer I joined Professor Bache's field party.

"In 1849 he wished me to volunteer for duty in California, but I declined unless promoted. In May, 1850, he promoted me, and I came out to the Pacific to inaugurate the geodetic work on this coast.

"For five years I remained here, and the work won his heartiest commendations publicly and privately; so that upon my return temporarily to Washington and Philadelphia our relations were of the most confidential character. I undertook every hard and disagreeable piece of duty he ever suggested. His constant cry was 'Results, Results,' and I gave them, much to his help when asking for large appropriations on the Pacific Coast.

"I soon returned to the Pacific Coast (1855), but twice broke down my health by overwork. In December, 1860, I returned to

the East. Very soon Professor Bache was made a member of a secret commission to furnish information, maps, etc., to the government, and here again our relations became very confidential. I made surveys of the Delaware River for its defence; in 1862 I was placed in charge of the armed Coast Survey steamer *Vixen* and sent to Florida; in 1863 I was appointed by Professor Bache Engineer of Fortifications for the defence of Philadelphia between the Schuylkill and Delaware (north), and made a survey, which the Superintendent visited regularly as the work progressed. He was conducting the regular work of the survey, and patriotically undertook the general charge of the surveys of the defence of Philadelphia. He was always an excessive worker, but here he almost doubled his duties, and, moreover, worked with great anxieties during the early days of that July. He must have worked eighteen hours daily. The result was that his health gave way and he was sent to Europe. The government continued his salary, but his friends in Philadelphia supplied further funds for his comfort, for professional advice and for travelling.

"In 1865 his health had broken down so much that Mrs. Bache had to beg the authorities in Washington to bring him home, and asked that I be sent to London for that purpose. There was no official authority for such duty, but I was given leave of absence, and went out at my own expense and brought him to the home of one of his sisters in New York. I saw him occasionally up to his death in 1867.

"PROFESSOR BACHE'S PLANS FOR THE SUCCESS OF THE CENTRAL HIGH SCHOOL; METHODS; PERSONALITY.

"In my school career I was ambitious to go to West Point and appealed to Professor Bache for advice and direction. The advice came quickly and pointedly but friendly, to repress such aspirations, because I would do better at the High School.

"In after-years, in our confidences as man to man, he told me his ambition had been to make the Central High School equal to West Point in all points pertaining to a thoroughly practical education, to fit a man for the duties of his professional or civil career.

"That he had tried to impress that view upon the Board of Controllers and upon the Faculty, and that both bodies were as anxious and as earnest as he to give the High School as high a standard as the age limit would permit.

"That was one reason why he insisted upon the introduction of

French, Spanish, mechanics, theoretical mathematics, and astronomy, chemistry, etc., as studies beyond the ordinary curriculum of history, the classics, etc. And certainly such professors as Kendall, Sanderson, Booth, Frazer, Deloutte, Wines, Peale, McMurtrie, and others united to give form and coherence to Bache's project.

"The Board of Controllers at that period was composed of the most influential, learned, and advanced gentlemen of Philadelphia, and they had great pride in the success of the institution.

"Professor Bache mentioned to me particularly that Spanish was introduced because our neighbors on the south were Spanish; the principal islands of the West Indies were under Spanish rule; Central America and a large part of South America used the Spanish language. I suppose that he looked forward to the day when the United States would hold part of Mexico.

"Professor Bache's name, experiments, observations, labor, and activities in the American Philosophical Society served to give a certain glow and warmth to the character of the High School.

"In every possible way he inspired his immediate friends and teachers and the teaching public with the importance of fostering and uplifting the 'People's College,' as he sometimes called it. And upon graduation the student looked upon his connection therewith as a sure passport to honorable occupation. He did not forget his former students. When in addition to other duties he was conducting the Magnetic Observatory of Girard College, even as late as June, 1845, all of the observers, except the day observer, were students of the High School. Charles H. Cramp, the famous ship-builder, was one of them.

"And when Professor Bache became Superintendent of the United States Coast Survey he selected from the graduates several young men for that work. Later on he frequently asked how his students had prospered, and whether the curriculum of the High School had served a good purpose. The professors under his régime he held in the highest esteem; and when the demand for services sounded in June, 1863, for the defence of Philadelphia, Professor John F. Frazer was the first to join him in the field work of fortifications around the city. Then Frazer told me that Professor Bache's influence had been so strong over him as to change his plans of professional life.

"Professor Bache had a remarkable suavity of manner; a pressure in a hand-shake that made you believe you were the chosen confidant; a smile of his liquid brown eyes that was irresistibly

winning with both man and woman. His voice was low and gentle, and only upon dire occasions in later years have I heard it raised momentarily in severity. The offence seemed at once forgotten. His forcible manner of presenting his case abided with him through life. He made himself sure that he was right and then held his reasoning clear and forcible. In public affairs. he was remarkably fortunate in carrying out every project he believed for the good of the work. He had done the same in the affairs of Girard College, the High School, the American Philosophical Society, and in the foundation of the National Academy of Sciences of the United States.

"In national matters he wielded a very large power through his great and extended family in the Army, Navy, Judiciary, and in the political field, and yet he was never a partisan in the latter sense. Professor Bache was an aristocratic democrat in all which that association of terms can mean. It presents his high and noble instincts for the benefit of the government and for the diffusion of knowledge among the people of the United States.

"Speaking once of a young Philadelphian who had failed in every kind of work given him on the survey, he said, 'I can't imagine how Joe has made such a failure of life; I believe thoroughly in blood, and that there is always some good and redeeming point in a man; but there is nothing in Joe whatever.'

"EDUCATIONAL STANDING OF THE HIGH SCHOOL IN THE EARLIER DAYS.

"You ask me what status the graduates had in those days. It happened within five years after graduation that I had come in direct contact in the work with students from Yale and the University of Pennsylvania, and I was astonished to find them no better equipped for the affairs of practical life in such work as the Coast Survey than some of my class had been, and in some cases not as well prepared. They may have known more Greek and Latin and more General History, but I certainly found nothing further. I recall several High School men who promptly showed their ability in law, medicine, chemistry, and traffic; some were notable.

"To-day the universities throughout the country have reached far beyond their educational status of 1845-50, and I have no means of forming a judgment of the progress of the High School from personal knowledge. Within this month a professor of Cornell was praising to me very highly the character of the High School graduates."

CHAPTER V

THE ASTRONOMICAL OBSERVATORY

No feature of the school's curriculum aroused more interest, nor was there any phase of its work from which more good was anticipated, than the teaching of astronomy. America was slow to take up the studies of the purely scientific schools. The pioneer work in showing the need of observatories was done in Philadelphia by the members of the American Philosophical Society. As early as 1768 the necessity of some provision " for ascertaining the longitude of Philadelphia and for observing the transit" of Venus, that was to occur in the next year, was mentioned. Several temporary observatories were erected for the purpose of examining properly this rare phenomenon, and these are among the earliest recorded observations in America, but they led to no permanent result.*

At the outbreak of the Revolutionary War, Provost William Smith had prepared a petition to the Assembly asking for an appropriation for a public observatory, but more urgent needs prevented any satisfactory consideration. In 1816 a proposition was agitated to erect an observatory on Centre Square, but in all these move-

* In 1740, Professor John Winthrop, of Harvard, observed a transit of Mercury reported to the Royal Society.

ments those interested numbered but few, and so there was no success. At one time a plan was suggested to collect a certain sum of money for an observatory on condition that the city should appropriate an equal sum, but before the Society had performed its part, the establishment of the Central High School opened the way for an observatory that should be public in its management as well as in its support.

At this time there was little provision for the scientific study of astronomy in the United States. In Jefferson's administration a plan for a national observatory had been submitted to the government, but it met with little favor. In 1825, John Quincy Adams, in his first message to Congress, urged with great forcefulness the backward condition of astronomical science in America.

"It is with no feeling of pride, as an American, that the remark may be made, that on the comparatively small territorial surface of Europe there are existing upwards of one hundred and thirty of these light-houses of the skies, while through the whole American hemisphere there is not one. And while scarcely a year passes over our heads without bringing some new astronomical discovery to light which we must fain receive at second-hand from Europe, are we not cutting ourselves off from the means of returning light for light, while we have neither observatory nor observer upon one-half of the globe, and the earth revolves in perpetual darkness to our unsearching eyes?" *

Several years passed by, however, before this recommendation was acted upon, and in the mean time the more enterprising colleges had undertaken to establish stations for exact astronomical work.

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* In 1832 the Astronomer Royal of Great Britain stated that he did not know of the existence of a single public observatory within the limits of the United States.

The Philadelphia Observatory at the Central High School is the fourth oldest in America, being preceded by Yale College, which mounted a London telescope in 1830; by Williams College, where an observatory was erected in 1836; and by Hudson Observatory, in connection with Western Reserve College, Ohio, which was established in 1838. It is probable that in Philadelphia an observatory was not originally contemplated as a part of the High School equipment, but the lively interest which the active members of the American Philosophical Society had been taking in astronomy, together with the generous appropriation to education which the distribution of the national surplus revenue had enabled the Controllers to make, seems to have led the Committee to the determination to place the High School fully in touch with the most advanced scientific work of the age. The time was ripe for such a development. The return of Halley's comet in 1835 had stirred up a universal interest in the wonders of the skies; to the ignorant and superstitious it was a warning of fearful portent, to the learned it suggested the need of careful study of the wonderful mysteries of nature. Doubtless in the halls of the Philosophical Society the group of men identified with the establishment of the High School met frequently and shared in the scientific discussions of the time. George Emlen, for eight years a member of the High School Committee, had been a member of the American Philosophical Society since 1827; two years later Dr. Bache was elected. In 1837, within five weeks of the laying of the corner-stone of the High School, Thomas Dunlap and Sears C. Walker became members, while of the early Faculty—Cresson, Booth, Hart, Boyé, Sanderson,

Frazer, and Kendall—all were actively associated with the work of this illustrious Society.

But while many took part in urging upon the city the advisability of establishing a public observatory, the pre-eminent leadership must be given to George M. Justice, a Quaker merchant of wide reading and benevolent character, who may truly be called the Founder of the Philadelphia Observatory. The diary of this excellent man, which is still preserved by his descendants, shows him to have been keenly interested in scientific observation. For many years he made careful record of meteorological facts; with primitive instruments he observed the eclipses and the display of the aurora borealis. In these wonders of the natural world he recognized the hand of a Creator, and he seems to have reached the conclusion that no study could be more helpful to his fellows than one which would lift them up to the contemplation of the vast designs of the Almighty. With full appreciation of its cultural value, he also urged the importance, in a commercial city, of some establishment in which correct time could be noted and chronometers tested. He wrote letters to the newspapers directing attention to current phenomena, and so in time he stirred up considerable local interest in the problems of the skies. The first notice of Halley's comet in Philadelphia came from his pen. His diary gives his account of the heavenly vision:

"This evening" [October 9, 1835] "I discovered, without the aid of my telescope, the long expected vision, Halley's Comet. . . . The reappearance of this comet confirms the accuracy of astronomical calculations, and affords subject for admiration, in that we are permitted to know so much of the wonder of creation as to be able to thus trace its progress to and from the sun."

Mr. Justice served on the Board of School Controllers from 1836 to 1841, and was a member of the first Committee on High School. In 1837 it was decided to appropriate five thousand dollars for an observatory, and the direction of the expenditure was placed under the control of that member of the Committee who had been most insistent in arguing for satisfactory provision for this higher scientific work. With his usual business sagacity, Mr. Justice carefully preserved all correspondence and memoranda relating to the purchase of the instruments, and it is peculiarly appropriate that, forty years after his death, they should have been presented to the Associated Alumni of the Central High School.

The first problem to be settled related to location. Should the Observatory be built in connection with the school, or should it be given a site removed from the city life? The Controllers decided upon the former, doubtless that it might be more conveniently placed for teaching than for observation. In his report of 1838, Mr. Dunlap discusses the obstacles of a city location, and expresses the hope that they may have been obviated by the special methods of construction that had been employed. In brief, the Observatory consisted of a square, hollow, brick tower, forty-eight feet in height, and with walls thirty inches thick at the bottom. This was surrounded by brick walls,—on three sides by the walls of the main building and the two wings, and on the fourth (eastern) by the wall which enclosed the lot. These outer walls sustained the conical dome, which revolved on twelve iron rollers, supported by a circular frame of wood eight feet high and eighteen feet in diameter. The

tower was insulated to the depth of eight feet below the surface of the ground, and was surmounted by a marble platform on which the equatorial rested. Professor Kendall was so well pleased with the plan of the tower that in 1842 he reports:

"In the midst of a crowded city, at the height of fifty feet, the instrument is so steady that no jar from the motion of carriages is ever detected, though the noise from that source often prevents the hearing of the beats of the clock. The insulation of the tower and instrument is so complete that no inconvenience is experienced by the observer, either by the turning of the dome or the walking of any number of persons in the Observatory. Moreover, such is the perfection of the turning of the pivots, sockets, etc., of the equatorial, and so perfect is its equilibrium in every position, that when moved by the clock-work, rack-work, or by the hand, no tremulous motion can be communicated to it."

The problem of construction was thus solved satisfactorily, but it was the equipment that gave to the Observatory its first claim to scientific recognition. In November, 1837, a number of members of the American Philosophical Society * united in a statement to the High School Committee, in which they described the grade and quality of the instruments that should be purchased for the Observatory. The ruling spirit in this petition was unquestionably Sears C. Walker, a graduate of Harvard, who after ten years' service as a teacher had become actuary of a leading insurance company in Philadelphia, but whose avocational interest in astronomy unquestionably dominated his life. To Mr. Walker, therefore, belongs the credit of the first suggestion that,

* The petition is signed by R. M. Patterson, Sears C. Walker, S. V. Merrick, J. C. Cresson, Jos. Saxton, and eight others.

since there was a more exact degree of workmanship abroad, the telescope should be imported from Munich. The High School Observatory was equipped with the first German-made scientific instruments brought into America.

The Controllers welcomed these suggestions in a cordial and hearty spirit, recognizing that they were dealing with a technical subject on which the advice of experts was an absolute necessity. Within a few weeks after this statement was presented Mr. Justice wrote to the firm of Utschneider & Fraunhofer, of Munich, whose reputation was world-wide among astronomers, and who were then engaged in making a mammoth telescope of fourteen and one-half inches aperture for the Pulkowa Observatory. The firm had been specially commended by the local scientists who were interested in the matter. "A Fraunhofer equatorial of these dimensions" [seven or eight feet focal length and seven inches aperture] "finely mounted would be superior to any instrument of the kind in this country."

There were many delays in the completion of the order. The old firm in Germany had been dissolved by death, and its work was undertaken by Merz & Mahler, to whom the letter of the Controllers was delivered, and who afterwards showed to Dr. Bache their order from "the Justice of Philadelphia." At first there was great hope that the instruments would be in position by the winter of 1838-39, but, in fact, the work was not commenced until April, 1839, and it was not until September 14, 1840, that George M. Justice was able to record: "I this day opened the cases and have mounted the telescope at my store; it is indeed a most surprising instrument,

and the view it presents of the heavens is doubly interesting." *

There can be no better description of these eagerly anticipated instruments than that which was written by Mr. Justice himself for publication in *The United States Gazette:*

"The astronomical instruments recently received by the Controllers of Public Schools for the use of the Observatory at the Public High School were manufactured at Munich in Bavaria. The celebrated makers, Merz & Mahler, successors to Utschneider & Fraunhofer, whose names are well known as the makers of the best telescopes of modern days, made the refractor, and the meridian circle was manufactured by Ertel & Son, after the late improved plan of Struve.

"Although it was known that instruments made at Munich were finished with much care, yet the perfection of these exceeds expectation. The admirable adjustment and compensating arrangements attached to the equatorial telescope are only equalled by its space penetrating power. It is eight feet in length, with an object glass six and one-half inches in diameter, graduated to four seconds. It also has a declination circle, graduated to ten seconds. The movement is regulated by clock-work, and, by a beautiful but simple contrivance, the motion of the instrument is adjusted to

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* The correspondence between Mr. Justice and the optician Merz is exceedingly interesting. The former courteously insists upon a more prompt fulfilment of the contract, while the latter explains that scientific work must not be hurried. Mr. Justice points out that his fellow-citizens are dissatisfied with him because of the delay, and it is noteworthy that he resigned from the Board of Controllers as soon as the Observatory was completed. One of the letters contains a quaint touch of Quakerism: "You will notice I do not use the title 'Herrn' or any other complimentary title in addressing you. I wish you to know that this is not from want of any respect or civility, but on account of my religious feelings, I being one of the Society called 'Friends' or Quakers, who do not use titles in addressing any one. I hope therefore you may not think me uncourteous."

the motion of the earth, or the apparent motion of the heavenly bodies, so that the observer has only to fix the telescope on the object and it continues in the field of vision.

"It has five magnifying powers, the lowest 85, the highest 480, and although there are many telescopes in this country containing greater magnifying powers, yet we are not aware that any one possesses sufficient distinctness to divide Saturn's ring when only the power of 192 is used. This planet exhibits at this time (the ring being at its greatest expansion) a most beautiful appearance, the belts as well as the division in the ring being visible with this power.

"As the instrument has not yet been permanently mounted, its powers have been only partially tested, but we hope, when properly adjusted, to have a view of some of the nebulæ and double stars, from which we promise ourselves much pleasure.

"The meridian circle has a telescope of five feet length, the circle graduated to two seconds, and no doubt, when properly mounted, will prove as highly satisfactory in its performance as the equatorial. The latest improvements of Struve have been added to this instrument, and as we understand that the Committee on High School have determined to defer mounting it for the present, we hope some more suitable place than was at first contemplated may be provided for it. It is hoped by many that the Councils of the city will be willing to appropriate a part of the square opposite the High School for this purpose, as they have already evidenced their disposition to promote the cause of science by passing an ordinance for the appropriation of money to erect an observatory, and as the Controllers have done this and provided the instruments, the carrying out of the ordinance by the Councils might now be completed at small expense. Few observatories in Europe are better supplied, and indeed, for all practical purposes, few better instruments can be had." *

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* "It is a matter for just pride that these instruments belong to the public schools,—that the education which leads to their use is now attainable by all, and that the arrangements of the High School are such as to reserve these advantages for those who pass through the subordinate public schools. The gentlemen to whom our citizens of this school district have delegated the power to establish and maintain this college for the people, deserve the lasting gratitude of the community for their hearty and successful devotion to the

So carefully had the Controllers planned this establishment that the total cost of the Observatory came within the appropriation of five thousand dollars made for that purpose. The itemized statement gives the following:

Meridian Circle, about $1200; Equatorial Telescope, $2200; Comet-finder, $245; a Lukens clock, $300; Sextant, $40; Barometer, $40; Chronometer, $250; Books for Astronomical Library, $600. Total, $4875.

The mounting of the Ertel meridian circle was delayed four years through lack of sufficient appropriation for a proper support. At first it was proposed to construct a separate tower for this instrument, which, as Professor Kendall was careful to point out, was far more important and useful than the equatorial; but the money was not forthcoming, and from 1840 to 1844 this beautiful instrument was allowed to lie in its case. Finally Joseph Saxton, of the United States Coast Survey, suggested that the meridian circle should be mounted upon the southern wall of the tower which supported the equatorial. To meet the expense of five hundred dollars which this entailed, the Controllers appropriated three hundred dollars, and the remainder was contributed by friends of Professor Kendall, who were anxious that he should have an opportunity to attempt an extended series of observations. Thus the Observatory was completed at last.

The character of this equipment, together with the scientific work of Bache, Walker, and Kendall, caused Professor Elias Loomis to state that, "The erection of

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good work of elevating the standard of public education, and procuring the means for all to reach that standard."—Editorial by Joseph R. Chandler in *The United States Gazette.*

this observatory formed an epoch in the history of American astronomy." * From all parts of the country there came inquiries as to the nature of the tools and the methods of the work. In 1842, Kendall reported that an instrument had been mounted in New York upon the model of our equatorial, and that a meridian circle had been made in Philadelphia upon the plan of the Ertel circle at the school. Three years later, Mr. Justice reported to the Philosophical Society that he had been asked to plan two more observatories, because of the experience he had acquired while serving as Controller. Within five years four Fraunhofer refractors were received and mounted in this country,—at West Point, Washington, Cincinnati, and Cambridge. There can be little doubt that the importation of these high-grade instruments led to a great advance in scientific methods in America.

During the years of Professor Kendall's service at the school the Observatory was in continual use, both for teaching and for observation. It was clearly shown in the early reports that one of these functions must of necessity interfere with the other; certainly no man could spend his nights in the dome and his days in the classroom and long survive. Professor Kendall asked to be relieved of most of his regular teaching, and that his teaching might be limited to a single course on astronomy and higher mathematics at special hours, so as to give him opportunity for observation work at night. But the Controllers were not able to afford a professorship with duties of this character, and this has doubtless been the

* *Harper's New Monthly Magazine,* vol. xiii. p. 29.

chief reason why the Observatory has not fulfilled wholly the hopes of its early friends. Nevertheless, it has exerted a potent influence in popularizing scientific study in Philadelphia. Groups of citizens, from time to time, asked to be shown some of the heavenly bodies by night, and so an interest in the school was maintained.

In the early days, when Dr. Bache was inspiring his associates with a hearty devotion to scientific work, some excellent observations were made. Writing in 1856, Professor Loomis says:

"In the hands of Messrs. Walker and Kendall this observatory became celebrated, not only in America but also in Europe. It has furnished four hundred and thirty moon culminations, about one hundred and twenty occultations of stars, and several series of observations for latitude; together with numerous observations of comets, especially the great comet of 1843. This was also an important station in several of the earlier telegraph operations for longitude."

In 1842 and 1843, Professor Kendall's reports were printed by the Board of Controllers, and his account of the comet of 1843 (which was observed by Walker, Bache, Patterson, and Kendall to a later date than at any other observatory) explains fully his method and the results. Three years later, careful observations were made of a transit of Mercury, and reported in *The American Journal of Science*. Other astronomers made frequent use of the Observatory. Hubbard, who in 1843 rediscovered the comet at Yale Observatory, asked and received permission to complete his work at the High School. Two years after Morse's invention of the telegraph, Walker, in conjunction with several other astronomers, made the first experiments to determine longi-

tude by telegraph. On October 10, 1846, the transit of a star was telegraphed to Philadelphia by Lieutenant Almy, of the United States navy, this being the first practical application, to use Walker's own words, "of the method of star-signals, which is destined, sooner or later, to perfect the geography of the globe." These are some of the more practical results of the establishment of the Observatory.

Any record of the scientific renaissance of 1838-45 that did not include an account of the Magnetic Observatory on the grounds of Girard College would lack one of the most illustrious features. Just prior to the establishment of the High School a suggestion of great moment came from the British Association for the Advancement of Science, which invited the co-operation of scientists in making a series of simultaneous observations in different parts of the world, in order to determine the fluctuations of the magnetic elements. During Dr. Bache's visit to Europe in 1836-38 he met with a number of European scholars, and became enthusiastically interested in a plan that promised so much for human knowledge. Upon his return, since the Girard Estate was in litigation, the trustees of the College decided to build a Magnetic Observatory on the grounds of the then unfinished College, the expense of maintenance being met by a number of contributions from the American Philosophical Society.*

In order that the Observatory might be suited to its work it was constructed in a most unique fashion. It

* For these facts due acknowledgment is made to George P. Rupp, formerly Librarian of Girard College.

was built entirely of wood, put together with copper nails. No iron whatsoever was used, nor any materials with ferruginous properties, in order to avoid magnetic attraction, the slightest degree of which would ruin the accuracy of the observations. Work was commenced in May, 1840, and continued for almost five years, under the immediate direction of Dr. Bache, and later of Professor Frazer. While this Observatory had no direct connection with the High School, except as both were outgrowths of the same intellectual movement, yet it is pleasing to record that it was in charge of two of the High School Faculty, and that they selected young men from the student body of the school to assist them in their work. Among the group may be mentioned George Davidson (Sixth Class), who gives a vivid picture of Dr. Bache in the previous chapter; Charles H. Cramp (Sixth Class), whose career is so full of interest to Americans; and Samuel Mecutchen (First Class), afterwards a member of the Faculty of the school.* Through the aid of these efficient youths, who thus early showed a scientific interest that was to remain strong through life, Dr. Bache was enabled to generalize upon a basis of twenty-one thousand six hundred and forty-five observations. "It is not too much to say," said Dr. B. A. Gould, "that of what we know to-day of the distribution, intensity, and periodic and secular changes of terrestrial magnetism

* The official report of Dr. Bache gives the names of thirty sub-assistants, of whom all but five were High School students; in addition to the above may be mentioned Kirkpatrick, Grandgent, Ruth, Laidlaw, Stephens, Magilton, Gideon, Houpt, and Lawson,—all of whom were afterwards prominent in scientific and public work.

we are indebted quite as much to Bache as to any other man." *

In the history of the Astronomical Observatory of the High School, the removal in 1854 to the Broad and Green Streets building deserves some notice, as special plans were again prepared for the insulation of the instruments. Two parallel piers of solid masonry were erected in the front part of the building on each side of the main entrance, and extended ninety feet to the ceiling of the fourth floor. Upon this solid foundation a stand was constructed for the telescope, and the instruments which had been procured in 1838 were transported to their new home, where they remained until 1900.

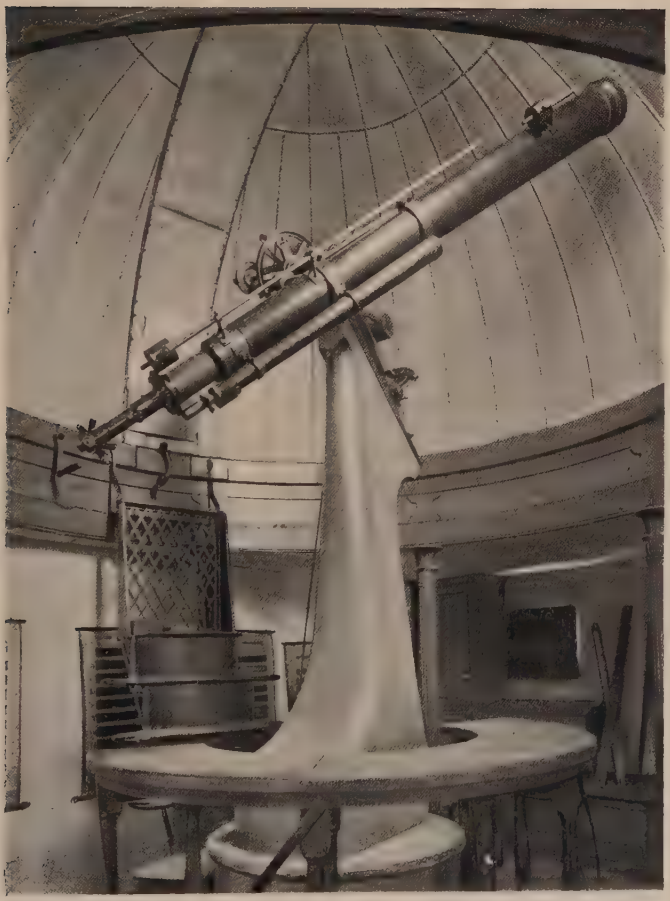
When Professor Kendall resigned in 1855, the work in astronomy was assumed by Professor McClune, who held the chair until 1877, when he was succeeded by Professor Schock. There is little record of scientific work during this time, and it is probable that the teaching side of the work interfered sadly with continuous observation. In 1869, Lieutenant J. H. C. Coffin, of the United States Naval Observatory, and superintendent of *The Nautical Almanac,* requested the use of the telescope to observe the great solar eclipse of August of that year. This permission was granted, and the telescope was taken to Burlington, Iowa, on the line of totality, not, however, at the expense of the city. Professor McClune accompanied the expedition, and reported to the Controllers upon its results. In the next year a similar request came

* See the appreciative address by Professor George F. Barker upon the presentation of a portrait of Alexander Dallas Bache to the A. D. Bache Public School, the gift of Joseph G. Rosengarten, Esq., April 13, 1898.

from Professor Pierce, of Harvard University, and Superintendent of the United States Coast Survey, who desired to take the telescope to Sicily, to observe a solar eclipse. This request was refused, however, on the ground that it would interfere seriously with the teaching of astronomy in the school.

In 1873, Monroe B. Snyder, a graduate of the University of Michigan, was appointed assistant in the Observatory, and thenceforward continued the astronomical work, at first under Professor McClune and afterwards in personal charge. Perhaps the most noteworthy of his observations was that of the transit of Mercury, May 5 and 6, 1878, when the report from the High School was one of the thirteen selected as a basis for the mathematical discussion of the times of contact. The transit of Venus of 1882 was also observed at the High School.

As the result of the recent agitation for new buildings and proper accommodations, the Observatory, in common with the other departments of the school, has profited to a high degree. It is expected that by January, 1902, its entire equipment will be in position, including a fifteen-inch telescope, and that the new and improved apparatus will enable it to serve the public to a higher degree than ever before. Anticipating this enlarged usefulness, in 1897 the Board of Public Education formally denominated this department of the High School the "Philadelphia Observatory," thus employing most appropriately a title first suggested by the American Philosophical Society in 1839. As the appreciation of the Observatory as a necessary part of the municipal equipment of a modern city becomes more apparent, it is to be expected that the



THE HIGH SCHOOL OBSERVATORY, 1854–1900

Philadelphia Observatory will win as high recognition for its scientific work as in the earlier days of the old High School.

The direct result of the astronomical work at the school may be observed in the enlarged outlook and the more intelligent conception of the universe to be found among its graduates. Indirectly, however, the Observatory has contributed to the establishment of the two largest observatories in America. It was largely through the influence of George Davidson, an Alumnus of the High School and the friend of Professor Bache, that James Lick was led to make his great benefaction to science. In 1874, Mr. Lick authorized Professor Davidson to announce that the greatest telescope in the world would be installed on the Sierra Nevada. Again, the Yerkes Observatory of the University of Chicago was founded and endowed by Mr. Charles T. Yerkes, an Alumnus of the Philadelphia High School of the Twenty-seventh Class, who first learned of astronomy from Professor Kendall.

To have aided in important scientific investigations, to have broadened the outlook of thousands of useful men, to have sent forth Alumni who have led in the establishment of the largest observatories in the world, —surely in this record there is to be found an ample justification for the early dreams of George M. Justice and his colleagues.

CHAPTER VI

JOHN S. HART AND HIS FACULTY

When Dr. Bache had announced to the High School Committee that with the commencement of the new school year his connection with the institution must cease, a diligent and active search was at once commenced for a successor. Mr. Wharton and his colleagues on the High School Committee spared no pains to secure the proper man, and their choice fell upon one whose connection with the Philadelphia public school system forms one of the most notable chapters in its history.

John Seely Hart was elected principal of the Central High School September 13, 1842, when, although but in his thirty-third year, he had already won a high reputation as an educational administrator. He was born January 28, 1810, in Berkshire County, Massachusetts, being descended from an old Puritan family, the first of whom had come over from England in 1630. When the future educator was two years old his family moved into what was then a wilderness in the upper part of Luzerne County, near where the city of Scranton is now located. There he continued to reside until he was thirteen years old. His earliest recollections were of a log house in the midst of a small clearing, skirted on all sides by the primeval forest. It was essentially a life of hardship, and for a boy, pale, delicate, yet of fine grain, it contained many elements of wholesome discipline. In later years Mr. Hart once described his boyhood as "one continued sorrow." In 1823 the family removed to Laurel Run,

two miles from Wilkesbarre. At this time his education was exceedingly limited and had been based upon Webster's Spelling-Book, Murray's English Writer, Daboll's Arithmetic as far as the rule of three, and the Bible.

Two things occurred about this time which entirely changed his career in life. The first was the establishment of a Sunday-School in the neighborhood. Two good ladies from Philadelphia who were spending the summer with their friends, in connection with a lady of the village, resolved to establish in this wild region a place for religious teaching. As there was no school nor church of any kind in the neighborhood, nor any dwelling-house suited to the purpose, it was determined to hold the school in a barn. The whole apparatus consisted of a few boards laid across old barrels and boxes which served as benches, a few tracts and books which the ladies brought with them, and blue and red tickets then given as premiums for attendance. John was present the first day that the school was opened, and is believed not to have been absent once so long as it continued. He was assigned to the care of one of the ladies from Philadelphia, Miss Mary R. Gardiner, whose broad culture, gentleness, and refinement exerted a most profound influence upon the boys to whom she devoted herself. To this lady John S. Hart was indebted not only for the religious impulse which remained constant through life, but also for the higher ideals and nobler conceptions which resulted from this friendship.

The other circumstance that so materially affected his career was a dangerous and protracted disease, which left him more feeble and delicate than ever. So incapable was he judged to be for any employment requiring physi-

cal strength that his friends determined to help him to obtain an education with the hope that he might gain a livelihood as teacher of the country school. When between thirteen and fourteen years of age he took his first lessons in geography and English grammar, and made such rapid progress that the attention of the good people of Wilkesbarre was attracted to him, and in his fifteenth year he entered the academy of that place. Some one gave him a Latin grammar, another lent him a dictionary, and he bought a Virgil with money obtained by the sale of straw hats which he had plaited with his own hands. Living in a home in which even candles were a luxury, he read the story of Dido and Æneas in the Virgil thus procured, by the light of pine-knots picked up in the woods on his way home from school. The whole of the Æneid was read by him in this manner, he himself while thus studying being obliged to lie at full length on the floor in order to get the proper benefit of the light upon the hearth. When he first began to attend the academy he lived at home and walked to school, a distance of about two miles. Subsequently, an arrangement was made whereby he boarded in the family of a clergyman and paid for his board by doing sundry chores. Besides this he was paying his tuition in the academy by assisting the master in hearing the lessons of the younger classes. After a life of three years thus spent he was not only thoroughly fitted for college but ruddy and glowing with health and stronger physically, mentally, and morally.

In the fall of 1827 he entered the Sophomore Class of Princeton College, and graduated in 1830 with a valedictory oration and the first honor for general scholarship. He at once received an invitation to become the principal

of Natchez Academy in Mississippi, and there he taught for about one year. Having in view, however, the preaching of the gospel as his life-work, he then returned to Princeton and entered the Theological Seminary. After a year he was appointed tutor in the college, and in 1834 Adjunct Professor of Languages. As a college professor he was distinctly successful and instituted changes in educational methods of considerable importance. He is said to have been instrumental in bringing about the substitution of entire treatises in the classics in place of the fragments formerly read. He was licensed to preach in 1835 and conducted services in the vicinity of Princeton, but in the following year he was offered the proprietorship and the control of Edgehill School in the succession to Enoch C. Wines. For five years he continued in the management of this school, which gave him a reputation throughout the entire country. His work was well known in Philadelphia, and when he learned of the resignation of Dr. Bache he determined to apply for the principalship thus vacant. His application to the chairman of the High School Committee was simple and dignified * and was accompanied by numerous testimo-

* "PHILADELPHIA, August 3, 1842.

"SIR,—Having heard through rumors that the situation of principal in the Central High School of this city is about to become vacant, I have the honor to present myself as a candidate, and take the liberty of addressing to you the enclosed testimonials, which I beg you to have the kindness to lay before the Board at the proper time.

"I am very respectfully, sir,

"Your obdt. servt.,

"JOHN S. HART.

"To GEORGE M. WHARTON, ESQ., Chairman of the Committee on the High School."

nials, of which perhaps the most interesting was an elaborate endorsement of Mr. Hart's ability and scholarship, signed by James Carnahan, president of Princeton College, and by seven of the most prominent members of that Faculty.

So convincing were the testimonies to his worth that he was elected with unanimity, no other name being presented to the Controllers. On September 21, 1842, commenced the long administration of John S. Hart as principal of the Central High School. On that morning the members of the Board of Controllers visited the school, and Mr. Wharton introduced Professor Hart to the Faculty and students. Appropriate speeches were made. Dr. Bache was given a touching farewell, and so the new administration was inaugurated.

The sixteen years of John S. Hart's principalship formed the halcyon period of High School history. There was an increase in popularity and usefulness; the school life was healthy and vigorous, and the Faculty was harmonious and well-directed. The teaching force was kept at a high plane by the continual infusion of new and vitalizing blood. The course of study was revised and rearranged, and as the years passed by the school became better and better adapted to the needs of the community.

The Faculty was almost entirely recast during this period, but two of the professors, Vogdes and McMurtrie, continuing from the Bache period to the Maguire administration. Professor Hart's influence in the selection of his colleagues and assistants was very great, and for many years there was the utmost cordiality in the relations of the principal and the High School Committee.

During this administration eleven professors and four-

JOHN SEELY HART
Principal, 1842–1858

teen assistants were appointed, and the high character of the selections is best attested by the great reputation which the school won in these years. In the month after Dr. Hart assumed the principalship there was a vacancy in the Department of Physics caused by the resignation of Dr. Cresson, and this led to the appointment of John F. Frazer, one of the most eminent of Philadelphia scientists. He had been graduated at the University of Pennsylvania in 1830, and during his college career and for some time afterwards he acted as laboratory assistant to Dr. Bache. Subsequently, he studied law and was admitted to the bar; but scientific work, through the influence of Dr. Bache, seems to have become his chief interest. He worked with Dr. Rogers in the geological survey of Pennsylvania, and at Bache's suggestion he was appointed to the professorship of Chemistry and Natural Philosophy in the Philadelphia High School, where he taught for about eighteen months. He is spoken of as a masterly teacher and a scientific lecturer of unusual merit.

While the department to which he belonged had not yet been properly equipped with apparatus, nevertheless, the instruction of Booth and Frazer was of an unusually high order. They impressed their pupils with a sense of power, dignity, and genuine interest in their work. In 1844, when Bache was appointed superintendent of the United States Coast Survey, his chair at the University was offered to Dr. Frazer, and thenceforward he was connected with the University of Pennsylvania until his death in 1872. He was Vice-Provost from 1855 to 1868 and Acting Provost during part of that period. He was a well-known public lecturer, and played a prominent part

in the scientific work of the Franklin Institute, the American Philosophical Society, and the National Academy of Sciences. Death came to him happily and peacefully in his University laboratory the day after the opening of the University buildings in West Philadelphia.

Upon the resignation of Professor Deloutte in May, 1843, François A. Brégy was elected to the professorship of French and Spanish. His connection with the High School covers nineteen years, in two periods, first until December, 1858, and afterwards from February, 1862, to December, 1866. During his service as a teacher of the French language Professor Brégy was the best-known worker in that line in Philadelphia. He taught not only at the High School, but at Girard College, the University of Pennsylvania, and also had many private pupils. He stayed at the school long after more advantageous offers had been made him from other institutions, and in his letters of resignation he repeats again and again his enjoyment of the school life and his thorough sympathy with its aims and methods. He was a native of Sedan, and had served for ten years as Professor of French Literature and Higher Mathematics in the College Royal at Mons. In 1841 he came to America and presently accepted a position at the Norfolk Academy. Shortly after he was recommended by Dr. Bache to the High School Committee, and then commenced his long and honorable service in that school. "Alumnus" records that as a teacher Professor Brégy was the very reverse of his predecessor. "He was always warm, rapid, animated, and enthusiastic. Upon any subject he flung himself *in medias res,* and the recitations of his classes, always characterized by impetuosity and vigor, would sometimes al-

most electrify. His loves and hates were intense; consequently his blame and praise were earnest, quick, and peremptory, but in the midst of excitement he never ceased to be master of himself. His friendship for his pupils was always fervent and well-defined, and their attachment for him was equally ardent."

As the school increased in attendance, Professor Hart suggested the advisability of selecting special assistants from among the most promising of the recent graduates of the school, who would be thoroughly familiar with the daily routine and hence able to attend to administrative details, and yet would not expect the salary of a full professor. In September, 1843, two assistants were appointed, James A. Kirkpatrick and Elvin K. Smith. They were the first graduates of the school to be commissioned to aid in its work. The latter held his position for but a year and then studied for the ministry. The former served with faithfulness, loyalty, and zeal for a quarter of a century, and won recognition as one of the ablest members of the Faculty. Professor Kirkpatrick's first teaching was in the English department under the personal instruction of John S. Hart. He was, however, rapidly advanced to higher work in mental and political science, and eventually, as his bent developed, he was transferred to the more practical studies of Phonography, Bookkeeping, and Civil Engineering. Thus his teaching directly affected the lives of hundreds of our ablest businessmen. In 1851 he was elected to the rank of professor. His close association with Professor Hart seems to have left a definite impress upon him, in creating a close personal interest in the life of the school. No other member of the Faculty spent so much time in following the

careers of the Alumni, in collecting and preserving the records of the school, and in maintaining its traditions. His retirement in 1868, to enter upon a responsible business position, was a great loss to the school, and brought from the Faculty a hearty recognition of his "gentlemanly deportment and upright character," together with the "eminent ability uniformly displayed by him" in his twenty-five years of service for the school.*

The next change in the Faculty was caused by the untimely death of Professor Sanderson in April, 1844. As this was the first break in the Faculty ranks from so sad a cause, it seems to have made a deep impression upon the minds of the public. Resolutions were adopted by both the Faculty and the students, and all connected with the school wore a badge of mourning upon the arm for a month. It is a very gratifying sign of the cordial relations between Faculty and students in these days that the students' resolution was copied into the Faculty minute-book for record.†

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* It is but simple justice to state that the sketch that has been given of the early history of the school could not have been prepared if it had not been for the collection of pamphlets upon educational topics originally made by Professor Kirkpatrick and preserved for the Archives of the Alumni by Professor Daniel W. Howard.

"I would mention my indebtedness to the study of phonography, which we were taught by Professor Kirkpatrick during the first two terms. He was very successful in the imparting of a thorough knowledge of shorthand, and it has had a very important bearing on the major portion of my business career."—Stephen W. White.

† "To the world he is known as the eminent writer, to thousands of the rising generation as the accomplished and popular teacher, but to those who knew him as a friend he will ever re-

The classical work was then assumed by Henry Haverstick, A.M., who taught Latin and Greek in the school for twenty-two years. He was a scholar of profound learning, and did much to encourage love for the classics in those whose tendencies inclined them to the liberal culture which these studies afford. In the reorganization of the curriculum in 1854 Greek was temporarily dropped from the course of study, and after 1862 it was not reinstated for twenty-seven years. This action was rendered necessary by the spirit of the age, which, finding reflection in the Board of Education, demanded that the time of the students should be given to subjects more directly related to business. It is apparent that the High School student who must make his own way in the world may look with little sympathy upon studies which seem remote in their application to the practical affairs of life. This attitude has added materially to the difficulties that beset a teacher of the classics. Those who studied under Professor Haverstick, however, bear gratifying testimony to his strong qualities as a man and as a classicist.

In October, 1844, Rembrandt Peale resigned from the Faculty which he had so fittingly graced in order to devote his entire time to artistic and literary work. It is probable that he was not altogether satisfied with the circumstances under which his work was done, and that he had expected a far heartier appreciation of the value of drawing than had been shown. Writing some years after

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main endeared by qualities of the heart which transcend all praise. They only can appreciate Sanderson who have felt the cheering influence of his smile and the warm pressure of his hand."—Faculty resolution, April 9, 1844.

Professor Peale's death, Professor Hart thus expresses the artist's ideals:

"Rembrandt Peale had two dreams, each worthy of his genius. One was to paint a Washington which should go down to posterity; the other was so to simplify the elements of the art of drawing that young boys and girls might learn it as universally as they learn to read and write. He spent long years in maturing a little work for this purpose, no bigger than a primer or a spelling-book, and a determined effort was made on the part of some of the friends of popular education to introduce the study into the primary public schools of Philadelphia. It was introduced into the High School. But its benefits were limited to a comparatively small number. The hope and the aim of the friends of Mr. Peale's project were to make the study an elementary one,—to make a certain amount of proficiency in drawing a test of promotion from the lower schools to the schools above it. This would have placed 'Graphics' alongside of the copy-book and the spelling-book. After struggling for several years with popular prejudice, the friends of the scheme were obliged to abandon it as hopeless. The idea was too much in advance of the times. Could the plan have succeeded, and could the entire youthful population of that great city, which is pre-eminently a mechanical and manufacturing centre, have grown up with a familiar practised skill in the use of the pencil in ordinary off-hand drawing, there can be no question that it would have added untold millions to the general wealth. If every boy or girl in that great metropolitan city were now obliged to spend as much time in learning to draw as is spent in learning to spell, and at the same age as they learn to spell, I do soberly believe that the addition to the wealth of the city by the increased mechanical skill that would be developed would be worth more than the entire cost of her public schools, although they do cost well-nigh to a million dollars annually."

The chair left vacant by this resignation was filled most appropriately by the promotion of Professor George J. Becker, who had been Rembrandt Peale's assistant for more than two years.

The next important vacancy occurred in November, 1845, when Dr. Frost resigned in order that he might

devote his entire time to the writing and arranging of his "Pictorial History of the World." To fill his position a competitive examination was instituted, and as a result James Rhoads was elected to the Faculty, in which he served for thirty-two years, until he was its senior member. He was the first grammar principal to be promoted to the High School, and the appointment was won by pre-eminent merit. He had prepared at the Friends' schools in Philadelphia and Westtown, and at Merion Academy. After teaching for three years at Upper Darby, he was elected principal of the Northwest Grammar School in Philadelphia. During his seven years' service in this capacity he raised his school to the highest point of efficiency, and at once attracted attention by his success in preparing pupils for the High School. In succession to Dr. Frost, he assumed charge of the Department of Belles-Lettres and History, although afterwards Elocution was substituted for the latter branch. As a teacher of the correct use of forceful English he was without a peer. His industry was prodigious,—each week he received compositions from every pupil in the school, to be examined, corrected, and rated. By a positive and peremptory insistence upon simplicity and precision of diction he forced his pupils into the habitual use of plain and direct speech. Certain current phrases which were found too frequently in the average vocabulary were absolutely prohibited.*

As a result he succeeded to an unusual degree in se-

* This rule is well illustrated in the poem to Professor Rhoads recited at the meeting of the High School Alumni on February 14, 1901, by George Alfred Townsend, from which the following verses are selected.

curing from his pupils the use of a direct, forceful, and incisive vocabulary. They have been very general in acknowledging their indebtedness to this teacher. The great number of High School graduates who have gone

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Bless his lion head and vision,
Him who taught us "Composition,"
Great James Rhoads! who at the blackboard
Chalked our infant rhetoric hard,
And each tautologic Jack scored
For those words that he debarred:
"*Persons! People! Very! A Great Many! A Great Deal!*"
("Two off! Four off! All off! Cipher!") No appeal!

Words like other incubuses—
Bad words, gad words, slang words, cusses—
Are innate. When these Alumni,
All so numerous, I see,
As a gypsy speaks his Romany,
Words forbidden rise in me:
"Persons! People! Very! A Great Many! A Great Deal!"
("Two off! Four off! All off! Cipher! Sit down!") No appeal!

Then I see the splendid city,
I remember only pretty,
Spanning rivers to the ocean,
Past a million, nearly two;
And the words, of their own motion,
Though forbidden, flash to view:
"Persons! People! Very! A Great Many! A Great Deal!"
("Two off! Four off! All off! Cipher!") I appeal!

Since my day the Female College,
Full of beauty, youth, and knowledge,
To our High School has come nearer.—
I would err, a boy again!—
Girls so many, so much dearer,
Compositions set for men:
"Persons! People! Very! A Great Many! A Great Deal!"
("Two off! Four off! All off!") But none ciphers! That I feel!.

into journalism or law or the ministry have united in hearty appreciation of methods which at first may have seemed severe, but were nevertheless effective as no milder plan could have been.*

Such a forceful character could not participate in the

From the old brick beehive yonder
Is the High School an absconder.
In a palace, like a Louvre,
Swarm the Academic birds.
'Twill be harder to manœuvre
Round those exorcising words:
"*Persons! People! Very! A Great Many! A Great Deal!*"
("Two off! Four off! All off!") What's a cipher but common weal!

But in time those words forbidden
Of themselves will end unchidden;
'Tis when age has thinned our classes
And our own names half forgot,—
Man delighting not, nor lasses,
We shall think not nor write not:
"Persons! People! Very! A Great Many! A Great Deal!"
("Two off! Four off! All off! Cipher!") No appeal!

*A few testimonials from the Alumni may serve to illustrate this thought.

"If I have accomplished anything in life, I owe that little more to him than to any other teacher I ever had. I knew him well in the class-room and in his home, and I am glad to testify to the integrity of his character, the purity of his life, and the charm of his conversation."—Samuel B. Huey.

"He was an ideal teacher, adding to profound acquirements in learning, stability in judgment, zeal in duty, and all purity and praise in private life. The cultured scholar, the worthy citizen, the sagacious counsellor, the Christian man."—Hon. Robert E. Pattison.

"He taught us by his uncompromising criticism of our literary style to cultivate in ourselves a precision and accuracy of expression which in after-years have been of incalculable value."—Stephen W. White.

work of a great public school without giving rise to an extended series of traditions. Many of the best High School tales are connected with James Rhoads. He had a custom of requiring the students to write their essays on the blackboard for public examination. One student whose composition was a bit of high-flown ecstasy about Nature and Spring will never forget the criticism which it brought forth. "What do you mean by all this?" was the professor's query, and when he had been told in simple boyish phrases, he struck out the entire paragraph with this remark, "If that's what you mean, then say it." Many were the compositions returned to the unfortunate owners with the single criticism "Copied; cipher." "Copied" with Professor Rhoads did not necessarily imply "not original": it was applied to thoughts and ideas that were not the sincere expression of the boy's own nature. He was wont to tell the story of a lad who insisted upon the originality of an essay, saying that he knew his composition to be original, for the article from which he copied was marked "original."

He was a man of great muscular strength and physical vigor. As a youth he was renowned in the country districts for his jumps in the field. He was accustomed to drive daily to the High School from his home at Haddington, and thus became the author of a now famous story of a triple "bull." His horse was put up at a stable some distance from the school. On one occasion, after having been late for several days, he came in on the lead for one or two days, which caused the hostler to remark, "Why, Mr. Rhoads, you're *first* at *last;* you're *early* of *late;* you used to be *behind before.*" If the anecdotes concerning Professor Rhoads could be col-

lected in book form, it would not be a small nor a dull volume.

When Professor Booth resigned in November, 1845, his place was filled by the appointment of Martin H. Boyé, who was a member of the High School Faculty for fourteen years. He was a Dane by birth, and a graduate of the University of Copenhagen. An accident turned his attention to chemistry, and he became infatuated with the subject. When twenty-four years of age he came to America and studied medicine at the University of Pennsylvania, and afterwards served in the Geological Survey of Pennsylvania. His was one of those rare minds which by earnest devotion to the study of the applications of science to industrial life do so much for civilization. This early work introduced Professor Boyé to Dr. Booth, and they formed a private chemical laboratory and also did much editorial work together; so when Professor Booth retired from the school it was natural that his colleague should be called to succeed him. For six years he taught in a subordinate position, giving but part of his time to his school duties; but in 1851 his department was raised to the same rank as the others. Provision was made for a laboratory, which was fitted up in the basement, and illustrative apparatus was provided. From this time, therefore, chemistry assumed its proper place in the curriculum.

In his work of instruction Professor Boyé labored under the difficulties that necessarily come when the teacher is a foreigner and the taught are high-spirited, irrepressible American boys. A good part of the physiological excitability of the students was worked off in the chemical room. But, notwithstanding the boys' occa-

sional pranks, those of scientific bent received much help from this teacher, whose work had added materially to the popular appreciation of his subject. In the Board of Instructors (as the Faculty was originally called) he was an active and useful member, and served in 1851 as the chairman of the committee that proposed the plan for the formal organization of a faculty. In February, 1859, he resigned his professorship, and has since lived in scientific retreat at Coopersburg, Pennsylvania.*

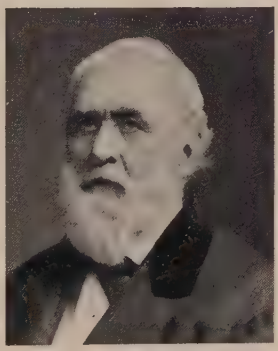
During this period there had been several changes in the corps of assistants. Daniel Strock served from 1844 to 1845 and then retired to aid Dr. Frost in his general literary work. He was succeeded by James Lynd, who held the position for but six months, then entered upon the study of the law, and was eventually elected a judge of the Common Pleas Courts of Philadelphia. Thomas B. Cannon was next in succession, and served for less than a year. His place was filled by one of the most active of the early Alumni of the school, Frederick G. Heyer, who was an assistant from 1846 to 1851. His stay was long enough to make a definite and pleasing impression. He was an energetic man, with full faith in the school and its ideals. He resigned to take up the study of the law, in which field his success was great. His successor, Samuel S. Fisher, is the third of this group whose teaching prepared the way for commanding success in the practice of law. He taught in the school from

* It will be of general interest to notice that Professor Boyé is still living, and is, with Professor Becker, among the oldest survivors of the Faculty. A letter was received from him dated October 5, 1898, at Honolulu, Hawaii, which shows that his eighty-six years weigh lightly upon him.

FRANÇOIS A. BRÉGY

HENRY HAVERSTICK

GEORGE J. BECKER



JAMES RHOADS

MARTIN H. BOYÉ

JAMES A. KIRKPATRICK

1851 to 1853 and at the same time studied law. During the Civil War he became colonel of an Ohio regiment. Afterwards he devoted himself to patent law with such assiduity as to win from Justice Blatchford this tribute, that he was the "best patent lawyer in the United States." As an appropriate culmination of a useful career, he served as United States Commissioner of Patents under President Grant, effecting a complete reorganization of the office and its methods.

Prior to Mr. Heyer's resignation a new assistancy had been created, to which, in September, 1850, Daniel W. Howard, a graduate of the Thirteenth Class, was appointed. Thus was commenced one of the longest and most popular services in the history of the school. Professor Howard taught in a number of fields in the early part of his career, until in 1863 he was appointed to the professorship of his chosen subject,—History,—and served with energy and zeal until his retirement in 1886. He was a great favorite with the students of the school, and by his genuine kindliness and approachableness he served as a good friend to many a youngster whose first months in the High School had been spent in fear and trembling. "Alumnus," writing in 1859, says, "We have never met with a pupil of the High School who had not a good word to say and a warm place in his heart for Mr. Howard."

The reorganization of the course of study in 1854 added German to the list of languages, and Frederick A. Roese, who had been giving voluntary and gratuitous instruction to special students for two years, was called to the chair. He was a profound scholar, deeply versed in his native literature, and as a teacher produced excellent

results; but his department was scarcely established before, in 1856, it was sacrificed to the demand for retrenchment in the cost of the school.

In May, 1852, Alexander J. MacNeill was appointed Assistant in Drawing and Writing, and after a year's service was promoted to the professorship in those subjects, in succession to Professor Becker. He was a man of æsthetic tastes, and when, in 1854, the school removed to the new building, in which a room had been specially prepared for instruction in drawing, he was enabled to advance materially the work under his charge. His connection with the school covers a ten-year period, terminating in September, 1862.

When Samuel S. Fisher resigned his assistancy there was elected to succeed him one who, like Fisher, had completed a full four years' course of the school in six months less than the prescribed time,—George Stuart. He entered the Central High School with the Twentieth Class in July, 1848, and was graduated from the school in February, 1852, having been enabled to complete the course in three and a half years on account of his high standing in scholarship. He at once entered the profession of teaching, and in January, 1853, he became an assistant in mathematics at his Alma Mater. In October, 1856, in consequence of retrenchment, he left the school to become one of the teaching force of Haverford College. It was there that he was first associated with Dr. Thomas Chase, afterwards president of the College, in co-operation with whom he prepared the Chase and Stuart series of Latin texts for school and college use, a work which made his name known in educational circles all over the land. After leaving Haverford he taught

in Girard College, and later re-entered public school life, serving as principal of the Weccacoe and the Hancock Grammar Schools. He resigned this latter position in 1866 and accepted a professorship of Latin in the Central High School, in which position he continued for almost thirty-one years, until his death on March 16, 1897. He was a man of remarkable linguistic power, and was intimately acquainted with fourteen languages, including Sanskrit, Hebrew, Syriac, as well as Greek and Latin. During his long career as a teacher Professor Stuart impressed upon the youth of two generations the stamp of a very strong and noble character. He was an extraordinary interpreter of the Roman mind and language, for he had so observed the gravity of the Roman temper that it appeared in all that he did and said. He had all the Roman passion for justice and equity, as appeared in his treatment of every student that came under his care. It was remarked that at one time, when members of the Faculty computed the averages of the students in the section specially assigned to their charge, he was the only member of the Faculty who would work out averages to the third and even to the fourth decimal place, in his desire that each should have his proper grade. He had a hearty impatience of slovenly and scamped work, and his teaching of Latin was a lasting lesson in habits of accuracy and exactness.*

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* "No one passed under his teaching without acquiring the highest respect for him as a man and a teacher. To his colleagues in the school he was an inspiration to fidelity, promptness, and thoroughness. While naturally a man of much reserve of manner, he showed himself of truly brotherly nature to those who got behind the crust and knew him as he really was. His older asso-

When the school entered its second building in 1854 the Faculty was enlarged by the addition of Zephaniah Hopper, who had been graduated with the First Class, and who was destined to round out the nineteenth century in the service of public education. This "grand old man" has been teaching in the schools of Philadelphia for fifty-nine years, and by his pre-eminent merit has won special honors from the Board of Education. His first work was done in the High School in 1842, during his last term as a student, when, as a member of Dr. Bache's training class for teachers, he taught English to the lower divisions for two hours each week. After graduation he taught in Frankford, and afterwards he served as principal in a boys' secondary school, and also in the Jefferson Grammar School, where his fidelity and genuine ability soon attracted attention to his work. From this position he was promoted to a professorship in English at the High School. So much of his career is bound up with the history of the institution that special mention of his work seems superfluous. An extract from Professor Hart's welcome to him as the new member of the Faculty has added significance, since almost half a century has elapsed since these words were spoken. "The laurels which he had won for himself there" [at Jefferson Grammar School], "it is to be hoped, are only the pledge of higher achievements, now that he has returned to the bosom of the nourishing mother, who has long been proud to acknowledge him as one of her worthiest sons."

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ciates in the work of teaching feel that his death has taken something out of their lives that cannot be replaced."—Robert Ellis Thompson in *The Teacher,* April, 1897.

In the year before the removal to Broad and Green Streets, Henry S. Schell served as assistant, but resigned in 1854 to take up the study of medicine. Contemporaneous with Professor Hopper's appointment two assistants were elected, Dr. Edward W. Vogdes and James B. Fisher. The latter served from 1854 to 1858; he was a great favorite with both Faculty and students, and was much regretted when he left to accept the principalship of the academy at Norfolk, Virginia. Dr. Vogdes's connection with the school covers a period of thirty-three years, until death ended his work. For four years he served as an assistant, until in 1858 he was elected to the chair of Mental and Political Science, which had formerly been occupied by the principal. In 1879, as a result of the resignation of Professor Rhoads, Dr. Vogdes became Professor of Belles-Lettres and Elocution, in which position he served until his death in 1888. He was a valued member of the Faculty, serving with his best efforts the school where his father and himself taught for a period covering half a century.

In his teaching of Political Economy he laid great stress on the practical aspects of his subject. Once, in order to illustrate the advantages of division of labor, he selected two groups of boys, and gave a lot of envelopes and paper to each. In one group, each boy was to fold the paper, put it in the envelope, seal and direct it. In the other group, one boy was to fold, another to seal, a third to direct. The rapidity with which the latter group concluded its share of the work was a sufficient proof of the theory.

In September, 1855, Professor E. Otis Kendall resigned to accept a chair in the University of Pennsyl-

vania. In order that the work in mathematics and astronomy, so important to the intellectual life of the school, might not fall into incapable hands, the High School Committee took special care to examine the antecedents of the applicants. Its report considers five, including graduates of the High School, Brown, Dickinson, and other colleges. The choice fell upon James McClune, a graduate of Princeton, who had, in the words of President MacLean, "no superior, if an equal, in his class." He had equipped himself for work in mathematics by special study under Albert B. Dod and Joseph Henry. He had taught in the public schools of Philadelphia, and was in charge of a country academy when called to the High School. For twenty-two years he taught in the school, where his career forms one of the most picturesque traditions. He was a man of great breadth of information, and prided himself upon his encyclopedic knowledge. During recess, students would crowd around him with a wide variety of questions in history, science, religion, etc. Some Alumni have stated that they derived more real knowledge from these chats than from any definite line of study; others look back querulously upon an instruction that certainly lacked system.

Of course, stories about Professor McClune grew apace. One of his first classes having determined to rout him by an unusual test, a member broke off a piece of curb-stone and took it to him with a question. In reply, he gave them an hour's dissertation upon the varieties of quartz rock. Later in his career an audacious youngster found in the basement a piece of antiquated gingerbread, hard as the rock it resembled. He took it to McClune

with the question, "Professor, what's this?" "That's five notes" was the oracular and not undeserved reply.*

Charles V. MacManus of the Thirty-fourth Class records that Professor McClune was a great inspirer of collections in minerals, and that his occasional lectures upon astronomical subjects led one of his classmates to construct an amateur telescope. There can be no question as to the suggestiveness of the teaching of the man whose knowledge was so broad and whose spirit was so kindly.

The last appointment of the Hart régime was that of William H. Williams, who served as an assistant from 1858 to 1859. He had been a recent graduate of the school, but his teaching career was too brief to lead to any definite results.

These, then, were the factors in the instruction of the school during the sixteen years of the Hart administration. While in some cases mistakes were made, it may truly be claimed for the eleven men who taught in the school in 1842 and for the twenty-five who were added to the teaching force from this date to 1858, that they represented in scholarship and teaching power a

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* Professor McClune had a custom of devoting the last portion of his hour to general information, and when the recitation was over the students would write their questions on the blackboard. Naturally, special efforts were made to catch the teacher napping. Once R. wrote on the board a question about the chrysalis of the *Pamphylia Satalicia*. McClune grasped the situation, and, turning to another, said, "C., you answer that." C. responded, "I cannot do it, professor, but I can ask one." Upon permission given, he wrote on the board, "Why are pedants generally the most ignorant of people?" Professor McClune gracefully referred the question to R., but received no response.

grade of ability not to be found in any other public school of the country, and not surpassed by the average college or university faculty of that time. The estimate of them which prevails among their pupils has been admirably expressed by Hon. Michael Arnold as follows: "Dear, good, and worthy men, we owe them a debt of gratitude which can never be paid! The labors of a teacher are irksome and exhausting, and always insufficiently compensated. We make no sacrifice and do but our duty when, thinking of the great benefits we have derived at their hands, we simply say that we acknowledge our obligations, and merely thank them." *

* Address on "The Administration of John S. Hart" at the Semi-Centennial Celebration of the Central High School, October 29, 1888.

CHAPTER VII

THE HART ADMINISTRATION

One of the greatest services which John S. Hart rendered to the High School was outside of the direct school work. He saw clearly that a public school, dependent for its support upon an annual appropriation, could not thrive properly without an organized public sentiment in its favor. In later years this support has been given by the Associated Alumni; but for the first two decades, when the very existence of the school was problematical, its friends were won, in a large measure, through the tact and energy of the early principals. Hart wrote for the newspapers and so secured their support for his school. He recommended his young graduates for positions in newspaper offices. One of his intimate friends was Joseph R. Chandler, a prominent journalist of the city. When the advertising columns contained such announcements as, "Wanted, young man. Graduate of Philadelphia High School preferred," Hart directed attention to this fact as a practical evidence of the value of a High School training.

The public men of the period became interested in the school. Each governor of the Commonwealth, from 1842 to 1855, visited the school, inspected its workings, and commended its plan and ideals. The ancient minute-books of the Faculty record that in succession David R. Porter (1842), Francis R. Shunk (1845), William F.

Johnson (1849), William Bigler (1853), and James Pollock (1855), each during his term of office, and usually with the State executive staff, responded to Professor Hart's invitation. These occasional variations in the school routine are wholesome both for the Faculty and for the students, for they help to impress the teachers and pupils with the idea that their work is rated highly by the world of affairs. But the crowning event in the school's social history occurred on June 24, 1847, when the President of the United States, Hon. James K. Polk, the Vice-President, Hon. George M. Dallas, and the Attorney-General, Hon. Nathan Clifford, honored the cause of public education by visiting the High School and addressing its students.

Numerous were the visits of educators who desired to inspect the school and to discover the secret of its success. In 1855 a committee of teachers from Lancaster reported to those who commissioned them that in their judgment the High School had made public education a success in Philadelphia, with the result that within twenty years the private schools were practically deserted. An earlier visit had been made by James P. Wickersham, who was afterwards to win a national reputation as an educator, and who thus commented on the High School: "The course of instruction is as extensive as that of most colleges, with this difference, that a more practical business-like turn is given to it." Even in England favorable attention was aroused. In 1845, James H. Tuke and Joseph Crosfield, two educated Englishmen of the Society of Friends, spent several months in the United States investigating school systems. Their report to the Friends' Educational Association was printed as a

pamphlet of thirty-one pages, of which more than one-third was devoted to the Central High School. It appealed to them as an institution of a type which had helped America and could help England.*

One reason for the interest of educators may be found in Professor Hart's active leadership in the public societies of the time. He was one of the pioneers in the formation of the American Association for the Advancement of Education, and his name is appended to the call for the first convention in 1849. He counted among his associates the leading men in the great struggle for public education,—Horace Mann, Henry Barnard, Thomas H. Burrowes, Alonzo Potter, and other friends of the schools. He was esteemed not only as a teacher, but also for the facility with which his pen aided in the propaganda. The first of the educational magazines of Pennsylvania, *The Common School Journal* (1844), was edited by him during its one year of life. Nor were his efforts confined to purely professional lines,—he was for a time one of the editors of *Sartain's Union Magazine,* as well as a contributor to its pages.

His energies centred in the High School, but that very

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* "We see in it four hundred boys selected from all classes of society, without respect to rank or patronage, whose only certificate of admission is superiority of talent and capacity for learning, —whose only certification for continuance is industry and good conduct. Here are seen, side by side, the child of the judge and the child of the laborer, the children of the physician, the merchant, the lawyer, and the manufacturer, in the same class with those of the bricklayer, the carter, the cordwainer, and the blacksmith, studying without distinction, under masters and professors of the same attainments, in halls and class-rooms equalling those of many of our colleges."—Extract from Report.

fact led him to take a keen interest in the general educational interests of the city. Noticing the zeal with which the elementary teachers, in most cases without proper training or education, strove to fulfil their duty, he urged upon the Controllers to establish Saturday classes for teachers. Prior to 1844 the High School observed Saturday as a working day, but in that year the Controllers authorized the principal to suspend the sessions of the regular school and to institute Saturday classes for teachers and other young women, to be conducted by the Faculty of the school. This was the commencement of public higher education for women in Philadelphia. When the Girls' Normal School was opened in 1848 these classes became less of a necessity, and after 1851 they were discontinued. This service to the general teachership justifies the claim that in usefulness Professor Hart was a Superintendent of Schools, as was his predecessor, Dr. Bache, by formal appointment. He was authorized to examine applicants to determine their fitness for the teachership; he made recommendations concerning the elementary course of study. It is not too much to say that every part of the system felt his quickening influence.

Nor was the principal of the school the only one of its teachers to interest himself in public and scientific activities. The records of the American Philosophical Society and of the Franklin Institute are replete with references to reports, etc., made by members of the High School Faculty. Professor Boyé was one of the founders of the American Association of Geologists,—the parent of the more famous American Association for the Advancement of Science. The public had reason to esteem

highly a group of men who showed such a helpful interest in the scientific life of the nation.

This general good opinion was deepened by the openness with which Professor Hart and his colleagues conducted the school. There were no mysteries, either as to its rules or its methods. Public investigation was courted as the easiest and best way to secure public approval. In 1843 the principal suggested to the High School Committee that a board of literary and scientific experts should be appointed to examine the pupils in place of the private written examination previously conducted by the principal. The proposition was at once accepted, and twenty of the most prominent citizens of Philadelphia served on the Board.* The examiners divided into eight Boards and spent ten afternoons in their work. They were guided by a syllabus of each course which had been prepared by the instructor, and they questioned the pupils orally and in writing. The result of their investigation was announced by the chairman of the Board (Dr. Ludlow) in these words: "The High School has only to continue its present career, availing itself of every improvement in the methods and means of instruction which may be within its reach, and yearly sending forth youths morally and intellectually well disciplined into the busi-

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* Alexander Dallas Bache, LL.D., Robert Bridges, M.D., Hon. Charles Brown, Joseph R. Chandler, Esq., George R. Graham, Esq., Ezra Holden, Esq., William E. Homer, M.D., Ovid F. Johnson, Esq., John K. Kane, Esq., Rev. John Ludlow, D.D., Morton McMichael, Esq., S. V. Merrick, Esq., William K. Mitchell, M.D., Henry Morton, M.D., Joseph C. Neal, Esq., Hon. A. V. Parsons, Captain Partridge, R. M. Patterson, Esq., Professor Henry Reed, and Richard Vaux, Esq.

ness occupations of life, to prove a source of blessing to our community and our Commonwealth."

But the support which at first was given querulously to its ideals and methods developed into a powerful force through the devotion and the useful lives of its Alumni. To-day, if any argument is needed in favor of such a school, it may be derived from the careers of its graduates. After 1850 one hears much of this conclusive mode of reasoning. In 1856 a city councilman (Knorr) replied to the charge that the money spent upon the school had not produced adequate results by describing the careers of its first one hundred graduates, sixty of whom, he declared, had already distinguished themselves in literary, commercial, scientific, or mechanical lines. The standard form of business advertisement in the fifties and sixties, "High School graduate preferred," has already been mentioned. But perhaps the most satisfactory sign of popular appreciation came in 1850, when a committee of citizens declared upon investigation that "no graduate of the Central High School had ever been arraigned before our courts on a criminal charge, and that no pupil of any public school, who had passed the third division of a grammar school, is known to have been convicted;" and at a later period this statement was reiterated by Hon. William D. Kelley, who had adequate opportunities for satisfactory judgment.

With this preliminary account of the impression which the High School and its teachers were making upon the civic life, the details of its internal organization may, perhaps, be more willingly followed.

For the first few years there was little variation from the course of study which Dr. Bache had planned. With

the general desire to bring the school into close touch with the city, there was established in 1845 a composite course of lectures upon the local environment. Professor Rhoads lectured upon the history of Pennsylvania; Mr. Kirkpatrick and Mr. Heyer considered local institutions in order to familiarize the pupil with the leading features of the life of Philadelphia; Professor Hart himself offered a course of lectures upon "The Public Schools of Philadelphia," in the preparation of which he read eight thousand pages of manuscript reports filed at the office of the Board of Controllers. Only with such careful study of the traditions of the school system could he count himself competent to lead in its work. In the same year Professor Hart arranged a course of one hundred lectures on the "History of English Literature," to supply what seemed to him to be the literary deficiency of the curriculum. "They can criticise Homer and Virgil and Cicero and Dante and Petrarch, while they know nothing really of Chaucer, Spenser, Pope, and Addison."

It is in the report in which these courses are described that the first positive expression of the collegiate idea is found. The attendance at the school was then in excess of four hundred; the capacity of the building had been reached, but the demand was apparently limitless. He therefore suggested to the Controllers that elementary subjects should be passed down to the grammar schools, so leaving the curriculum free for advanced studies. The plan was carefully considered, but it was not until 1849 that the Faculty was authorized to examine applicants for admission in United States History and Constitution, Elements of Algebra and Mensuration, in addition to Reading, Spelling, Writing, Grammar, Geography,

and Arithmetic, the time-honored subjects for the elementary schools.

Professor Hart justified the raising of the standard by an argument upon which all progress is necessarily based: "The Primaries are to be improved by elevating the Secondaries; the Secondaries by elevating the Grammar Schools; the Grammar Schools by elevating the High School. The whole system, in short, is to be improved by every part rising equally, gradually, and constantly."

Contemporaneous with this advance in standard, the Legislature, in an act approved by Governor Johnson on April 9, 1849, conferred upon the Controllers the authority to grant academic degrees in these words:

"Section 17. That the Controllers of the Public Schools of the First School District of Pennsylvania shall have and possess power to confer academical degrees in the arts upon graduates of the Central High School in the City of Philadelphia, and the same and like power to confer degrees, honorary and otherwise, which is now possessed by the University of Pennsylvania."

When this act was considered there was apparently no question as to the educational position which the Central High School should occupy. It was established for the full education of the young men of Philadelphia, and now that it had passed its experimental stage the school was to be made the collegiate capstone of the educational system. If the people assumed the task of educating themselves, they should do it thoroughly. The Legislature did its work with a full knowledge of the situation. Early in 1849 a committee of the Legislature visited the school, and its members were much interested in the curriculum, the organization, and the school life. The

legislative provision was offered in the Senate, as an amendment to a miscellaneous bill, by Benjamin Mathias, who had formerly served in the Philadelphia Board of School Controllers and was a well-known journalist of the city (founder of the *Saturday Chronicle*). This bill passed the Senate, and was taken up for consideration in the House of Representatives a few days later, when a member moved to amend the Senate provision by extending the power to confer degrees to all of the school boards of the State. This aroused an extended discussion; but it was finally defeated, and the Senate amendment concurred in, by a vote of forty-four to thirty-seven. Such was the origin of the collegiate position of the school.

The course of study was now broadened by the introduction of new subjects. General History was strengthened, Trigonometry, Surveying, Navigation, Bookkeeping, Phonography, Elocution, and Anglo-Saxon were introduced. The practical nature of this curriculum is evident, and it justifies the theory of the school, that it was to fit for life and not for an institution of a higher grade. In scientific and mathematical studies it is probable that the school was abreast of the colleges of the day. In language studies it could not cover so much ground, for the study of other languages than English was not commenced until the pupils entered the High School. Until the introductory work in the foreign languages is taken up in the elementary schools the High School can never hope to attain to advanced grade in this line.

Some of the subjects of the curriculum deserve special consideration. Professor Hart was one of the first to recognize the importance of the study of Anglo-Saxon

in acquiring a thorough knowledge of the English language. It was as yet almost unheard of in college curricula. In the previous year Harvard had introduced Anglo-Saxon as an optional subject, but it is probable that the High School was the first American school to require the study of the parent form of the English language.*

Hart's course in Anglo-Saxon commenced with the second term, and covered the remaining three and one-half years of the curriculum. For the first three terms it was an historical and interpretative study of Old English Literature from Cædmon to Shakespeare. Then in D was commenced the Anglo-Saxon Grammar, with readings from the authors; the texts being Klipstein's "Saxon Grammar" and his "Analecta." It is to be lamented that this branch found so little favor with the Board of Controllers that it was given scarcely a fair trial. The course was offered for but four years, and in 1854 it was dropped from the curriculum. The reason for this action on the part of the Controllers will be understood by the student of local history, who will recall that the period of Know-Nothing agitation was not an auspicious time for the advocacy of the study of foreign languages.†

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* The first mention of Anglo-Saxon at Harvard is in the catalogue for 1849-50: "The Anglo-Saxon Language is also taught (to those who desire to learn it) by Mr. Tutor Child." The course was probably discontinued after a few years, as it is not mentioned in the catalogue for 1854. Thomas Jefferson's plan for the University of Virginia also required the study of Anglo-Saxon.

† As a concluding word upon this interesting educational experiment it may be well to notice the opinion of Professor Hart's colleagues on the subject. In 1853 the High School Committee

The study of German was a consequent step in the development of the curriculum. In 1852, Professor Roese offered his services to the High School, and for two years he organized and conducted volunteer classes. So great was his success that in 1854 he was elected to a full professorship in that language; but although the value of his teaching was apparent to the thoughtful, it was not the only factor in the case, and in 1856 Know-Nothingism and a desire for retrenchment brought about his resignation. During the period 1850-54, when Professor Hart's influence was at its height and his ideals most nearly realized, the school offered courses in Latin, Greek, French, German, Spanish, and Anglo-Saxon. It has been suggested that this record is not surpassed by any college of the period. Of course, limitations of time prevented the degree of progress attainable in those institutions which required that the elements of the languages should be mastered before admission. Nevertheless, the teaching was thorough in quality, and that is far more important than mere quantity. This may be contrasted with the course of study in 1887, when but Latin and German were taught.

Phonography was taught in the Central High School from 1849 to 1862, and has again been introduced in the Commercial Course in 1898. Its early study was

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asked the Faculty to give an opinion as to the value of the study of Anglo-Saxon. A special committee of five was appointed (Professor Rhoads, chairman), and its report was unanimously in favor of the continuance of the study. The chief argument against it was that the boys did not like it; the conclusive argument in its favor, that it was the language from which were derived two-thirds of our English words, and hence must be studied if one would acquire a thorough knowledge of our language.

due to special circumstances of peculiar interest. The Pitman system was first published in 1827, and afterwards in an improved form in 1845. It won rapid popularity in America, and in Philadelphia a phonographic society was formed from among the leading citizens to conduct an agitation in favor of a subject which would add so much to business efficiency. Oliver Dyer, a Pitman enthusiast, asked permission to form a volunteer class in the High School, and in 1849 this was granted. He taught two hundred and fifty students gratuitously for one term out of school hours, and with such marked success that the next year it was made a regular subject under Professor Kirkpatrick, who had been one of Dyer's pupils. Professor Hart was quick to recognize the strong points of the study. In a public school students must, as a rule, depend upon themselves for their first start in life; hence the curriculum should include not only the studies that tend to general mental power, but also a few bread-winning studies which will help the graduate to obtain a position as soon as he leaves school.

During its twelve years in the course of study phonography was bitterly attacked and zealously defended. Its critics asserted that it made bad spellers and was not educative, etc., but Professor Hart conducted a series of experiments to refute the first * and by argument rebutted the latter contention. In 1854 it was proposed to drop the study, but a committee of citizens protested vigorously, and an investigation was conducted by which some

* He dictated a series of exercises to a group who had been taught phonography, and to a younger group in H who had just entered the school, with the result that the mistakes in spelling of the latter were to those of the former as five to one.

interesting facts were brought to light. The report of the investigators contains a letter from Professor Hart, in which he states that some of the graduates "not yet turned of twenty are now making more money by phonography and reporting than the principal of the High School, after having given himself for more than twenty years to his profession." He summarizes the arguments in favor of the study apart from its bread-winning power in the following: "It aids the student by facilitating the taking of lecture notes in the higher work; it is a part of general education, in that it necessitates habits of close attention, and requires the cultivation of the ear."

Many illustrations might be given of the initial success of the graduates through this study. When Samuel S. Fisher was in A, he was appointed with another to report an important law-case involving the constitutionality of the Fugitive Slave Law, in which Francis Wharton, Esq., was engaged. This eminent lawyer was so much pleased with Fisher's report that he at once invited him to study law in his office.

For many years the Congressional reporting at Washington was in the hands of High School graduates,—John J. McElhone, the Murphy brothers, James B. Sheridan, David Wolfe Brown, and R. Alexander West. The first wrote in 1854:

"I acquired the rudiments of Pitman shorthand at the High School, and afterwards pursued the study of it myself, and so successfully that in a year's time I was deemed capable of a place on the Union Corps of Official Reporters for the Senate of the United States, though only turned of sixteen years of age. I assisted in reporting the proceedings of that body during the whole of the Compromise Congress in 1849-51. Of the nineteen official reporters, four are High School scholars. Murphy has met with

the same success that I have. He is in the Senate and I in the House of Representatives. I have no hesitation in saying that he is the first of the Senate reporters on our paper. Young Sheridan was brought here at the commencement of this session, and put in the Senate to learn reporting. It would seem that the day is not far distant when the High School will supply the Congress with reporters, as it does the Coast Survey with clerks."

When the school moved into the new building in 1854 there was again a rearrangement of the curriculum, when Spanish and Greek and Anglo-Saxon were dropped and the Principal and Classical courses were combined. Henceforth there were but two courses,—the Principal or four-year course, and the Elementary, which covered but two years. It is to be noticed that the former was by far the most popular, and was taken even by those students who expected to attend for but two years. Two years later the reduction in the appropriation caused a further curtailment of the curriculum: German was dropped and the Elementary course was combined with the Principal. Thenceforward, practically until 1888, there was but one course of study, the principle of election being sacrificed, and the two languages, Latin and French, and after 1866 Latin and German, were taught to all of the students. Certain practical subjects, such as bookkeeping and arithmetic, hitherto confined to the Elementary course, now became a part of the general curriculum. In brief summary, then, it may be stated that until 1854 the High School expanded in many directions; its course was improved and strengthened and its teachers were properly supported. But after 1854 politics and pettiness began to play an important part in the management of the school, and the result will be seen in the discussion of its history during the next decade.

The government of the school was quiet and harmonious during this period, and the internal machinery worked without friction. The system of demerits was employed in cases of misconduct, and the number of demerits from each professor was subtracted from the average for scholarship, the result being the general average in that branch. Consequently there was the strongest possible inducement for good behavior. Each morning the principal made the round of the rooms with the record books of each section, and read the demerits for the preceding day. Thus he came personally in touch with each student of the school. For special offences a professor might summon a student before the Faculty, which met on Saturday morning (except from 1844 to 1851, when the classes for teachers were in operation, and after 1852, when the time was fixed permanently for Friday afternoon). These weekly meetings of the Faculty to review the rolls and to consider cases of discipline continued from 1838 to 1888, and were a most efficient means of developing cohesion in a large and growing school. The records of these sessions have been carefully preserved, and if given to the public would awaken in many a distinguished Alumnus memories vivid and perhaps unpleasant. Throwing in the corridors, fighting, occasionally cursing, crowding on the stairway, and bringing torpedoes into a class-room are some of the charges. Once a student was punished with twenty-five demerits for some misdemeanor, and on the next day another confessed to the offence. Instantly a special meeting of the Faculty was called to rectify the wrong. If a student was not demerited during the week, his good conduct would remove those acquired in preceding weeks. The

general order and discipline were excellent, and while occasional outbreaks occurred, they may be attributed to boyishness rather than to malice.

In 1851 the Board of Instructors was formally organized into a Faculty, and thenceforward the principal was known as the President of the Faculty. Rules and By-Laws were prepared for the regulation of the business. One difficult task to be performed by the Faculty was the selection of the Commencement speakers. Usually there was a competitive oratorical contest in which the Faculty heard the would-be speakers and then selected the best. In 1856 a special rule was adopted whereby the first student of the class was awarded what was called the honorary address, the second student the salutatory address, and the valedictorian was selected by special vote, and was supposed to be the best speaker.

The school day commenced at 8.45 A.M., when the students assembled in three large rooms, one on each floor, there being no general assembly room prior to 1854. The Bible reading was conducted by the principal and two other members of the Faculty. At first Bibles were distributed to students, and the reading was responsive by verses, but this aroused prejudice, and one denomination petitioned that the students of their faith should be permitted to use Bibles of a certain edition. As a result the reading was thenceforth the function of the professor alone. The six hours from 9 A.M. to 3 P.M. were divided into eight working periods of forty-five minutes each. One of these was devoted to recess, which came at different times for different sections. The four upper sections (A, B, C, D) were dismissed at 1.30 P.M., E and F at 2.15 P.M., while the first-year students (G

and H) remained until 3 P.M. The reason for the variation is to be found in the conclusion of the Faculty that the older students were better able to study for themselves and to pursue independent lines of reading than those who had just entered the school; hence the lower classes were given one or two study periods each day in the school building under the supervision of the Faculty.

The summer vacation was six weeks, extending from the middle of July to the end of August. In 1846 a proposition was carried in the Board of Controllers to shorten this holiday by two weeks, thus concluding the vacation about August 15. This caused great consternation among the Faculty and was equally unpopular with the students; a vigorous agitation was undertaken, in which it was argued that the lads needed at least six weeks' rest after their assiduous devotion to their school work. Naturally, this view of the case prevailed, and the Board reversed its action.

From a material point of view, the important change of the period was the removal of the school from Juniper Street to the southeast corner of Broad and Green Streets. For fifteen years the first building served its purpose, but as the neighborhood became more and more filled with business houses, the noise and bustle interfered with the school's work. There was need of room for growth. In 1851 the playground was sold, and shortly afterwards it was announced that the Pennsylvania Railroad Company was about to erect a depot upon an adjoining lot, which would make the Juniper Street property undesirable for school purposes. In January, 1853, therefore, the Controllers sold the site and building to the railroad company

for forty-five thousand dollars. With a portion of this money (sixteen thousand dollars) a new site, ninety-five by one hundred and fifty feet, was purchased from Richard Wister, and the new building was commenced.

The corner-stone was laid May 31, 1853, with great ceremony, in the presence of Controllers, Faculty, citizens, and students.* The proceedings opened with prayer by the Rt. Rev. Alonzo Potter, after which there were addresses by Nathan Nathans, Esq., chairman of the High School Committee, Professor Hart, George M. Wharton, Esq., Dr. Robert J. Breckinridge, of Ken-

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* The box deposited in the stone contained the following articles: a copper-plate on which was engraved

CENTRAL HIGH SCHOOL.

Corner-stone laid May 31st, 1853. Erected by the Controllers of the Public Schools of the First School District of

PENNSYLVANIA.

COMMITTEE ON PROPERTY,

charged with the erection of the building.

Benjamin Baker, Nathan Nathans,
Joseph Cowperthwait, James Peters,
Jacob C. Slemmer.

COMMITTEE ON HIGH SCHOOL.

Nathan Nathans, George M. Wharton,
Thomas G. Hollingsworth, Harlan Ingram,
T. K. Collins.

President.—Daniel S. Beideman.
Secretary.—Robert J. Hemphill.

Also the city daily newspapers, the weekly papers, *Graham's*, *Godey's*, and *Peterson's* Magazines; the coins, nine in number; the Reports of the Board of Controllers for ten years past, and other educational documents.

tucky, Hon. John C. Knox, of the Supreme Court of Pennsylvania, Harlan Ingram, Esq., Hon. William D. Kelley, and Hon. Thomas B. Florence. Sickness prevented the attendance of Governor Bigler.

The work upon the building was pushed vigorously; the committee in charge appointed a superintendent, who directly managed the construction, there being no main contractor. In about thirteen months the building was ready for occupancy, and on June 28, 1854, it was formally dedicated to its noble work. The exercises upon the occasion were simple and yet full of hope and promise. Rev. P. F. Mayer, D.D., conducted the devotional exercises, after which there were eloquent addresses by Rev. Henry A. Boardman, D.D., and by Morton McMichael, Esq. It was of happy omen that the latter, who in 1836 had been one of the committee to arrange the original plan of the school, should have been present to wish God speed to the "People's College."

The Controllers and the Faculty were much delighted with the new building. It had cost for site, construction, and furniture about seventy-five thousand dollars, of which three-fifths was secured by the sale of the old site and the remainder by city appropriation. It had been constructed with special view to service as a school building, with all the improvements which experience could suggest. In 1854, Professor Hart read a description of the building at the convention of the American Association for the Advancement of Education, after which Hon. Henry Barnard stated that, so far as his knowledge went, "there is no building in this country or in Europe in which the now recognized principles of school architecture are so thoroughly carried out."

Although this building is thoroughly familiar to more than two generations of High School graduates, yet some of its features may be mentioned. The walls throughout were built hollow to prevent dampness. The Observatory is built upon two piers of solid masonry, which stand isolated from the rest of the structure, being enclosed within the walls on each side of the front entrance. The class-rooms are well lighted; the stairways are broad, so as to afford ample facilities for the change of classes. There are fifteen class-rooms, an assembly hall for six hundred, an office for the principal, and an Observatory and basement rooms, which were afterwards fitted up for laboratories. The ventilating system had been planned with unusual care, so as to maintain a constant current from the flues to the ventiducts. The ceilings are unusually high (twenty and sixteen feet), which permitted a large volume of air in each room. These were the novelties in school architecture that won high commendation in 1854, but which ceased to be modern in 1900.

While the building was in progress the school continued to use the Juniper Street building, but by the terms of the deed of sale a large rent was to be paid if possession was not given to the railroad company by March 1, 1854, and the transfer was to be accomplished by June 1 at the latest. The Controllers therefore, decided to vacate April 16, 1854, and then transferred the High School to temporary quarters in the old Normal School building on Chester Street above Race. This building was not well adapted to High School work, and Professor Hart reports, somewhat pathetically, that discipline and instruction were much impaired. On September 4, 1854, the

THE SECOND BUILDING, 1854–1900

school took possession of its new quarters, and so commenced a second period in its history.*

The public had great expectations of the school now that it was in its new home, and the first sign of appreciation came in a most gratifying form,—a general increase in salaries for the teachers. Commencing with 1854, daily declamations before all of the students became part of the school life. In the first building this was not possible, as there was no large assembly hall, but that was now remedied. Professor Hart's custom was to conduct the opening exercises at 8.45 A.M., and then at 2 P.M., before dismissal, all were assembled in the great lecture hall and listened to declamations and occasional orations from students of the upper classes. This daily practice in public speaking before a large audience became one of the important features of the work, and has had much to do with the success of the Alumni in public life.

It is to be regretted that the abundant promise of the year of the new building met with but a scant and unsatisfactory fulfilment. While there is much in the history that is pleasant to contemplate and intensely gratifying to local pride, it must also be recorded that periodically the school has been subjected to criticism, much of which has been unfair, and to attack, which has been essentially unreasonable. Its opponents have followed generally one of two lines of argument,—either

* When the Juniper Street building was torn down, the contents of the old corner-stone were found in a state of pulp. Professor Boyé was asked to analyze the mass and to explain the reason for the decomposition, and his report to the Controllers (1854, Appendix M) is most interesting from a scientific point of view.

they have advocated the complete abandonment of public higher education, on the ground that the State is under no necessity to provide training in more than the elementary branches, or else they have attacked the school as extravagantly conducted, a good thing in theory, but not well administered, the pet foible of certain Controllers who have unfairly diverted funds from the elementary schools to this pretentious hobby.

These criticisms commenced even during the administration of Dr. Bache. Because he was Superintendent of Schools as well as principal of the High School, he was personally attacked as a dual office-holder, and subjected to scathing criticisms from writers in the public press, who shielded themselves with a *nom de plume*. It is probable that these semi-anonymous articles, as indicative of a lack of popular appreciation, aided in bringing about Dr. Bache's resignation.*

In 1845 the bitter political struggles began to affect the school. As yet the party lines were not drawn in the Board of Controllers, but the mischievous system of government in Philadelphia required that the Controllers should estimate the expense of conducting the public schools, and then apply to the County Board for the appropriation. In the County Board for this year the appropriation to the High School was carried by but one

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* In Professor Hart's private papers there was found a scrapbook entitled "Records of the War of 1842, 1845, and 1856," which contained clippings of news-letters relative to these attacks upon the school. This book was presented by Professor J. Morgan Hart to Mr. Simon Gratz, of the Board of Public Education, who has given it to the Archives of the Associated Alumni.

majority,* so near was the school brought to an early grave.

Having successfully weathered these earlier storms, it must have been comforting to the management of the schools to know that in some cases investigation had made friends in most unexpected quarters. In 1850 a special committee of four was appointed by the County Board to report what retrenchments could be made in the cost of the school system. The names of the inquisitors—Craig Biddle, Jesse R. Burden, Thomas K. Finletter, and Fayette Pierson—sufficiently indicate the value of their inquiry. Their report examined the ideal of the public schools, and reached this judgment, that "The design of the present school system is to give to every one who desires it a thorough education at the common expense,—an education similar, if not superior, to that obtained at our colleges or universities. The full course, 'beginning with the alphabet and ending with the differential calculus,' is fitted for the child and suitable for the man." They reported that the High School, which was examined with special thoroughness, was a democratic institution of great usefulness; its records showed that from 1838 to 1846 there were admitted twelve hundred and sixty-nine, of whom but fourteen were children of clergymen, nine of lawyers, and twenty-one of physicians; they therefore dismissed the argument that it was a class institution with the caustic comment, as true a half-century later as it was at that time, that the chief complaints about the school seemed to come

* The vote was nine to eight. See *Public Ledger*, September 18, 1845.

from those who would not send their children to public schools because they were "charity schools." Even the scholastic standing of the school was inquired into, and the report of the committee contains a synopsis of the course of study, prefaced with the statement that "The qualifications for admission are rather more than they are at West Point and rather less than at Cambridge."

But the main problem was involved in a question that this special committee put to representatives of the Controllers,—whether it would not be better to confine the system of education to the common branches. The answer was clear and decisive, that such a course would be a grievous error; it had been tried from 1818 to 1836. The consequence was that there was no stimulus to exertion from either scholars or teachers,—the schools languished, were odious, were stigmatized as poor schools, and the people could not be induced to send their children. "From the very year the Controllers enlarged the course of studies and established for this purpose different classes of schools, beginning with the Primary and ending with the High School, the system began to find favor with the community, and scholars thronged for admission."

The year 1854 was a stormy period in Philadelphian history. To signalize appropriately the expansion of the High School a general increase in the salaries of the Faculty had been made, and this centred upon the school criticism from a score of sources. In the Board of Controllers the school was fiercely attacked, and the principal was charged with incompetency. Religious and political differences had much to do with embittering the contest. In March an act was introduced into the Legislature providing for a division of the school fund among certain re-

ligious sects which maintained schools. While this never became a law, its mere suggestion was repugnant to the citizens of Philadelphia, and led to agitation and unreasonable strife. The great Know-Nothing victory in the mayoralty contest of 1854 led to some apprehension lest the public schools, as well as the police force, should be governed by Native American principles.* Its chief

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* As an illustration of the attitude of the Know-Nothing partisans these two curiosities, copied from the original letters in the office of the Board of Public Education, are given:

"PHILMONT, Aug. 18th, 1854.

"TO THE SCHOOL DIRECTORS OF THE PHILADELPHIA PUBLIC SCHOOLS: Hearing that you have discharged several Teachers on account of thier views in religion, I thought why you would not be in wante of new Teachers, for which purpose I apply. I can teach any of the English branches, am now teaching, but would like to remove to that section of the country.

"Furthermore I am a native born American, and profess no Catholic Faith.

"For references apply, etc.

"Yours ect.

"R. C."

"BROOKLYN, Aug. 12, 1854.

"GENTLEMEN: I see by a despatch in this morning's papers that the *good work* has begun in earnest, and that there is a prospect, in your city at least, that American Schools are to be taught by American teachers.

"I go heart and hand with you in this matter—for I am 'American born' as were my 'Parents' and 'Grandparents' and have been an 'American' teacher nearly 20 years. I am now occupying a place every way agreeable, *but* if in supplying the places, those —— —— now being removed, you should lack *material* of the 'right' stamp,—please make a note that, I stand ready to accept a call—though under other circumstances I could not consent to take the charge of a public school in the city.

"Yours for the Prot^{t} American Cause,

"Respectfully,

"A. C. V. E."

effect upon the High School was a curtailment of the work in foreign languages, as unnecessary and unprofitable studies to the American youth. As might have been expected, Anglo-Saxon, the most purely cultural study in the course, was first sacrificed, but that did not end the narrowing. Anticipating a decreased city revenue, —a forerunner of the panic,—Councils, in their desire to retrench, cut three thousand dollars from the High School appropriation. It was directly charged in the public press that this plan was agreed upon at a Know-Nothing conference between leading politicians, in which one of the Controllers urged that three of the professors in the High School should be dismissed because they taught foreign languages, German, French, and Latin. "America must be more Americanized, and teaching these languages only kept up a desire for things foreign." To avoid alarm, this should be done under pretence of retrenchment in expense.* Afterwards this statement was softened in an editorial. What the motive may have been cannot now be determined, but the facts are that the High School Committee in 1856 proposed to meet the reduction by dismissing Professors Roese (German) and Haverstick (Latin) and Mr. Stuart, exactly as had been announced. Professor Hart opposed such a slaughtering of the curriculum, and as a result Latin was saved, but Professor Roese and Mr. Stuart resigned, and there was a general reduction in salaries.

That all this political business was repugnant to John S. Hart's finely cut nature is very apparent. He was wearied of the struggle. His old friends were being

* *The Pennsylvanian*, December 20, 1855.

forced out of the Board of Controllers; the consolidation of the city in 1854 had resulted in a more thorough organization of the political machines, and positions hitherto outside of partisan consideration were becoming the subjects of bitter rivalry. Of the twenty-four Controllers who served in 1854-55, but three remained in 1858-59, and the leading characteristic of the new appointees was an intellectual arrogance, born of an intimate acquaintance with the machine. The principal was fettered by all sorts of conditions and regulations that framed him in on every side. When his curriculum was curtailed and the efficiency of the school diminished, he felt that the time for a change had come. In 1856 the city of Philadelphia saved three thousand dollars; it lost, eventually, the services of John S. Hart! In the ten years of strife and jealousy that followed, when the school lost in prestige and usefulness, when the system was affected with pettiness and partisanship in high places and internal bickerings and dissension, the lesson to the city was taught so plainly that he who runs may read.

When, after sixteen years of loyal and successful service at the High School, it was announced that Professor Hart was contemplating resignation there was universal protest from Faculty, students, and Alumni. Those who were most in touch with the work of the school could best appreciate the value of his services. In 1858 it was proposed to him by Dr. I. Newton Baker, who had been a student of the Central High School in the Twenty-sixth Class, and had left the school five years before this time, that he should enter the service of the American Sunday-School Union and become the editor of its periodicals. That this work appealed to a man whose

service both as a teacher and as a Christian leader was well known to the community was evident, and yet it is probable that Professor Hart's best friends as well as the members of his own family protested against his retirement from public work. On October 29, 1858, at a special meeting of the Faculty of the Central High School, Professor Hart announced his resignation.*

The regret of the Faculty was sincere and lasting. Professor Vogdes assumed the general conduct of the school, and two weeks later was appointed acting principal by the High School Committee. In the mean time Faculty and students prepared for a fitting farewell to

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* "CENTRAL HIGH SCHOOL,
"PHILADELPHIA, October 29, 1858.

"TO THE FACULTY OF THE HIGH SCHOOL.

"GENTLEMEN,—I have this day transmitted to the Controllers of the public schools my resignation as principal of the High School for the purpose of entering upon the service of the American Sunday-School Union. My duties in the latter place will begin on the first of November, but I shall, if such be the pleasure of the High School Committee, continue to give daily a portion of my time to the superintendence and government of the school until my successor is appointed.

"The resolution which I now make known to you has not been suddenly formed, but has been in contemplation for several months. That the announcement of it should be so abrupt has arisen from circumstances which I could not control.

"In the interval about to occur before the appointment and accession of my successor, I shall leave the school whenever I may happen to be absent in the charge of Professor Vogdes as senior professor.

"With sentiments of profound regard, the growth of long years of service in a common cause, I remain, gentlemen,

"Most sincerely and truly,

"Your friend and obedient servant,

"JOHN S. HART."

one who was truly loved and whose services to the school had been of very great value. The following resolutions were adopted by the Faculty at a special meeting of November 5, and were suitably engrossed and presented to Professor Hart:

"*Resolved,* That we have learned with deep regret that Professor John S. Hart has resigned his situation as principal of the Central High School;

"*Resolved,* That while the untiring industry, the extended learning, and the uncommon administrative ability of Professor Hart have gained for the High School the elevated position it now occupies, his studied kindness, urbanity, and consideration for the welfare of all have acquired for him the sincere esteem and affectionate regard of the Faculty;

"*Resolved,* That Professor Hart bears with him our best wishes for his future success and happiness, and our hope that his usefulness to society may be no less in his new sphere than it has been in that he is now leaving."

On December 3, 1858, came the official parting. At noon the Faculty and students assembled in the lecture-room for the purpose of presenting to the late principal a suitable memorial of esteem. Several members of the Board of Education as well as other educators were present. Professor McMurtrie addressed the pupils and the friends of the institution upon the occasion which had brought them together to bid an affectionate farewell to one who for over sixteen years had been at the head of the Central High School. George Alfred Townsend, a pupil of Class C, then delivered a very appropriate and original valedictory poem. Three days before, at a mass-meeting of the students of the school, a series of resolutions had been adopted. These were properly engrossed in the clear Spencerian hand of the chairman of the meet-

ing, Joseph R. Rhoads, and certified by Alexander P. Brown, secretary, and were now read by the chairman. Then followed Joel Cook, Jr., who, on behalf of the pupils, presented a set of silver to the retiring teacher. The plate included a massive salver, pitcher, and a pair of goblets, richly chased and of a unique and artistic pattern. Upon the salver was engraved a representation of the first and second High School buildings, while in the centre the name of "John S. Hart" was placed. The undergraduate address is reported as having been delivered with much feeling, and was as follows:

"GENTLEMEN,—You are here to-day to witness the parting of friends,—a teacher is about to be separated from his scholars. The Central High School is to lose an efficient principal. A man, whose reputation and that of his school have grown up together, is about to leave the scene of his labors and repair to another field. You are here to-day to see that the same feelings actuate boys which actuate men. That a long career of unexampled perseverance, patience, and devotion can command at their hands the same gratitude as it does from their fathers. And you are here now to witness the performance of that last kindly act which, when done, will sever the official connection between Professor Hart and the Central High School forever.

"Professor Hart, it is not to be supposed that you and your school are to part with each other without some regrets; and still further is it from belief that the school system of Philadelphia is to lose one of its best aids and supports without some slight expression on its part of the extent of the loss. More than sixteen years ago did you come to the High School. Then elected its principal, you have held that office ever since. Under your efficient superintendence the school has prospered. It has by its merits acknowledged your presence. It has been more and more adapted to the wants of the public, and has become less and less a burden to them. Its expenses have been lessened. Everything connected with it—learning, proficiency, or expense—has been rendered more and more satisfactory to the public, those who are the most interested, and if they were disposed to look and find out at whose door to lay their thanks they would not have far to go.

"A scholar is generally supposed to be on bad terms with his teachers, and to dread them as he would the fire, but in your case it has been different. In you the student has found a friend and counsellor. In success or misfortune he has alike looked upon you for advice and support. When his happiness knew no bounds, and in the transports of his joy he has been liable to forget those little proprieties which go so far to make life agreeable, one word, one look, even, from you would restore him to his wonted gravity. When the scholar was disgraced, ashamed of himself and of his teachers, when his classmates derided him and preceptors had lost all confidence in him, when hope everywhere else was gone, he would fondly look upon you, sure of good and wise counsel. My dear sir, you hardly know of the love and respect which is felt for you in this school; it takes a great occasion to develop it; but when one comes, then do you feel it, and in your consciousness of having deserved it, almost say to yourself, 'Why did I ever leave the High School?'

"I now come to the last part of my duty, and it is a part upon the performance of which I cannot look with pleasure. It is to sever the last tie which binds you to the High School. It is to proffer to a departing teacher some slight expression of the respect of his scholars. To present him with a memento,—a mark of remembrance,—and in doing so, to request him not to forget its donors. Professor Hart, let me present to you, in the name of those present, this slight gift, and may the love with which it is received be the only thing which equals that in which it is given. It is a tribute freely given. A tribute to worth, knowledge, excellence, and devotion. We are here to-day to part with you and to bid you farewell. Think not that you have toiled sixteen years for nothing. If you have gained nothing else, you have at least gained the love and respect of the High School boy, and, boy though he is, he has as large a heart and as whole a soul as any one in existence."

Professor Hart's response was most touching. He prefaced his official farewell with the intimation that if it were possible for anything to shake his determination to leave his work as a teacher for the field of journalism, it would be the spontaneous kindness of so many of his former pupils. Then in feeling phrase he briefly reviewed

his career at the High School, with a few suggestions as to the proper attitude of an alumnus towards his Alma Mater. A few paragraphs may be most appropriately given from this valedictory:

"I can say with entire truth, and I say with a most profound emotion of thankfulness, that from all that large number of young men in my sixteen years of service I have met with but one instance of direct and open disobedience. It has been occasionally my wont when a class was about to graduate to call them into my room just at twilight on the evening of the day before Commencement and there, laying aside for a few moments my official character, to take them all severally by the hand and to address them a few words of friendly counsel, not as the principal of the school, but as a man addressing his fellows. Such an occasion when both professors and pupils were away—when those halls, ordinarily so teeming with life and bustle, were profoundly quiet, when there was nothing to distract and nothing to intrude—seemed to be peculiarly appropriate for a friendly communion of things into which a stranger entereth not.

"The solitary act of disobedience which has been mentioned occurred more than eight years ago, and by a singular coincidence only yesterday I received a letter from the young man referred to, now a student of theology in another State, recalling in terms of almost girlish endearment and affection the recollection of our past relations, and after reminding me of the parting scene with his class on the evening before he graduated, saying that he traced distinctly his first religious emotions and his present position as a candidate for the ministry to what took place in that parting interview, thanking God for the care and fidelity which had been exercised over him while a boy in the Philadelphia High School."

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"I could have wished, my young friends, to part with you severally, class by class, in the same private manner in which I parted with his class. But your wishes have been otherwise, and I have acquiesced. Public, however, as the occasion is, there are a few things which I must needs say to you on this, the last occasion on which we shall ever meet as principal and pupils.

"Not until the age of the oldest among you is more than doubled

will you understand the eager interest with which an instructor of youth watches the intelligent development of his pupil. Deeper even than that feeling, farther within the very penetralia of his heart, is the emotion which arises when he sees ingenuous youth not only maturing knowledge, but gradually acquiring a nicer sense of personal honor,—when he sees the rude becoming decorous, the rough and boisterous becoming gentle and gentlemanly, the frivolous becoming sedate and earnest,—when in that he sees evidence of moral days, greater even than the intellectual ones,—when he sees, moreover, in connection with this steady intellectual and moral improvement a generous and almost chivalrous attachment towards the institution where it has been received, mingled, it may be, with some feeling of kindness towards himself."

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"Not only stand up for High School boys wherever you meet them, but stand up for the High School. Let it be understood, wherever you are known, that whoever traduces the People's College traduces you. You need not insult him. You need not get out of temper. You need not say or do anything indecorous or ungracious. But you can let it be understood, without impropriety, that that man, whoever he is, lowers himself in your estimation who does anything to malign or injure the High School, or who tries, by a miscalled economy, to embarrass the operations of that noble system of public schools of which the Central High School is the crowning glory." *

This farewell of the teacher so highly esteemed made a very deep impression not only upon the students present, but also upon him who was the subject of the greeting. Professor Hart kept by him in his private papers the resolutions adopted by students and Faculty, together with a copy of Joel Cook's farewell address. Forty years after this event these papers were transferred by his son, Professor J. Morgan Hart, of Cornell University, to the Associated Alumni of the Central High School, and now they are deposited with its archives.

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* This address was reported phonographically by the students.

The career of Professor Hart after he left the Central High School is not directly concerned with this narrative. For two years he remained with the Sunday-School Union, and during that time he took an active part in planning *The Sunday-School Times*, of which he was the first editor, and with which he continued until 1871. His interest in Sunday-School work was very great, and had been strengthened by his personal experience as superintendent of a large Sunday-School in Philadelphia. Indeed, many critics have concluded that his influence was paramount in systematizing the principles and methods of teaching the Bible in Sunday-Schools. In 1862 he was called to Trenton to serve as principal of the State Normal School of New Jersey. In 1872 he was elected Professor of Rhetoric and English Literature at Princeton. Two years later he retired from active teaching and returned to Philadelphia to devote himself to private literary pursuits. His death was caused by a sad accident, due in large measure to his kindly interest in young men. On January 23, 1877, on a cold winter evening, he had been out to return to a young writer a manuscript which he had taken pains to correct. On his way home he slipped and fell on an icy pavement near his residence in this city, 228 South Broad Street, fracturing his hip and perhaps receiving internal injuries. A few days later he sank into a state of semi-consciousness, and continued gradually to fail until Monday morning, March 26, when he died.

Professor Hart was actually engaged in teaching for more than forty years, having had under his personal instruction more than seven thousand pupils. He was eminent as a writer, as an editor, as a literary critic, and espe-

cially as an educator. Through his text-books and his essays upon the theory and practice of teaching he reached uncounted thousands who never saw or heard him. His influence upon young men was especially noteworthy. The Alumni who attended the Central High School during his incumbency received a definite impression of a strong, healthy, vigorous nature, sweet in its refinement, genuine in its culture. He was especially interested in matters concerning the spiritual life. For many years he made it a practice to present to each graduate of the Central High School a copy of McIlwain's "Evidences of Christianity."

The editor of *The Sunday-School Times* concludes his biography of the founder of that journal with these words, "They that be teachers shall shine as the brightness of the firmament, and they that turn many to righteousness as the stars forever and forever."

CHAPTER VIII

RECOLLECTIONS AND REMINISCENCES

The only satisfactory test of the work of a great city school is the character of its product. If its graduates are men of brains, with the ability and the desire to live industrious and useful lives, if in their after-careers they acknowledge the benefit of their schooling and find in it a material reason for their success, then certainly such a school is justified by its fruits. To a signal degree this has been true of the Central High School.

In order that the evidence may be at first hand we will quote from the testimony of four former students, all of whom lived in Philadelphia in their youth, but afterwards achieved distinction in other places and along four widely different lines.

Henry George, journalist and economist, received his last schooling in the Central High School. He entered on February 5, 1853, and left on June 20 of the same year, so that he obtained but a taste of what the school had to give. His interest was probably in the affairs of the world, even at the age of fourteen, for his son writes that he did not think that he learned much at the High School, as for him "it was idle and wasted time." Among his classmates were Theodore Cramp, shipbuilder; George Eldredge, book-publisher; Robert Glendenning, banker; J. Morgan Hart, professor at Cornell; Dr. Bushrod W. James, scientist and author; David H.

Lane, leader in public affairs; Simon A. Stern and W. Nelson West, lawyers; General Gustavus W. Town and Colonel William A. Wiedersheim, heroes of the Civil War. Four years among lads of such promise might have yielded abundant return even to so acute an intelligence as that of the founder of the Single Tax.

One of the most eminent Alumni of the High School in public life is Hon. Charles F. Manderson, for twelve years United States Senator from Nebraska, President *pro tem.* of the Senate in the Fifty-first Congress, brigadier-general in the army of the United States, and president of the American Bar Association in 1900. He was a member of the Twenty-fifth Class, and was admitted to the school February 14, 1851, and left on January 20, 1853. His two years of study were well spent; it was his last schooling, and it is now remembered with hearty appreciation by one who has shown the sterling qualities of manly power on the battle-field, in argument and in council, and in the highest legislative body of the land.

Writing in 1891, Senator Manderson said:

"I recall the days spent in the old building, near Market and Broad, with great pleasure, and it certainly would afford me infinite satisfaction to meet some of those who were pupils of the High School with myself. I would be glad also to pay my tribute of respect and admiration to the long line of teachers and professors who have done such good service, not only to Philadelphia and the great Keystone State, but to the country at large, by the faithful and intelligent performance of their arduous duties. The men who ruled from thirty-five to forty years ago in the old High School did so with a rod of interest and affection. I well recall that quiet gentleman who was so long at the head of the institution, Professor John S. Hart, and with his name come vivid recollections of Professors Rhoads, Vogdes, Brégy, Fisher, Howard, Hopper, and Dr. McMurtrie. Nearly all have passed from the scenes of activity,

and most of them have joined the great majority. Their memories shall always remain green with me, and I feel assured, from what I hear, that they have worthy and efficient successors."

T. Guilford Smith, a Regent of the University of the State of New York, is one of the most useful men of his generation. In business, he has been identified with the organization and development of the iron, steel, and coal industries of Western New York and Pennsylvania; but he has never permitted his manifold business responsibilities to interfere with full attention to the greater civic duties that cannot be better performed than by one of large interests and broad views. He is a graduate of the Thirty-second Class of the High School, and has contributed the following account of his school days:

"My earliest school recollections carry me back to a dame's school at the Friends' Meeting-House at the corner of Ninth and Spruce, and which is probably stamped upon my memory more forcibly because of a fire there, owing to an overheated flue, which caused the school to be dismissed rather summarily, and therefore made quite an impression. The name of the teacher of that school, I think, was Mary Cox, and the only one whom I remember connected with it distinctly was the late J. Shipley Newlin, whom I saw from that period up to the time of his death. The next school that I went to was at the Orange Street Meeting on Washington Square, which was kept by two ladies named Coxe, of both of whom I have only shadowy recollections. From there I was sent to a private school at Sixth and Prune Streets, kept by Charles J. Allen, who was a Friend who went to Orange Street Meeting. I have not very strong recollections of this school, except that at it were Randolph Parry and Henry G. Morris, with the latter of whom I have kept up an acquaintance. It was here that I first heard read Pope's English version of Virgil. I suppose I pursued the ordinary studies of a boy of my age. From here I was sent to the English and classical school of Henry D. Gregory, on Market Street near Eleventh, where I remained for some years, and where I received a very good training in the classics and in ancient history; but as all the studies were arranged for entrance to college,

and as Mr. Gregory was a Princeton man with some slight leanings towards the University of Pennsylvania, his studies all had this general character, which to my father's mind was not altogether in the right direction. At this school I recall several of the Rosengartens, of whom Mr. Adolph Rosengarten was more particularly of my age. Also Mr. Edward R. Wood and Mr. George R. Wood, Mr. George Gilpin, and others. I was here prepared to enter the Freshman class of the University of Pennsylvania, but in September, 1853, my father suddenly changed his mind and concluded that I would receive a better education by going to the Central High School than by entering the Department of Arts of the University of Pennsylvania as it was then carried on. As the law required at least one year's attendance in the public schools before I could enter the High School, I was obliged to go to the secondary school in Cherry Street near Sixteenth Street, to see whether I was fit to enter the grammar school, and I remember being stumped by an example in compound long division. I was permitted, however, to enter the fourth division of the Northwest Grammar School, the principal of which at that time was Aaron B. Ivins, an exceptionally good teacher with a wonderful capacity for mathematics, particularly in the line of practical arithmetic. I have seen him multiply seven figures by seven figures and set down the result as fast as he could make the chalk-mark on the blackboard, and he did it without apparent effort and without any fatigue. I remained at the Northwest Grammar School during the entire year of 1853, and found among my fellow-students William McMichael, George W. Carpenter, Clement A. Griscom, Joseph R. Rhoads, Frank Firth, and others. Some of us, who had been particularly lacking in geography, practical arithmetic, and other studies embraced in the public school course, took private lessons of Mr. Ivins at his residence on Race Street, and went there every evening to be instructed particularly and especially. The examination for entrance into the High School was held in the Girls' Normal School in the vicinity of Eighth and Race, and we had the pleasure of being the largest class that had ever been sent up to the High School from the Northwest Grammar School, and none of us was rejected. Mr. Ivins had never had any rejections in the course of his experience, and it was on account of his success as a teacher that the Northwest Grammar School was selected by my father, particularly as he resided in that section of the city.

"As the High School building on Juniper Street had been sold

and a new one at Broad and Green erected, we were the first class to enter that new building, in Division H, and I remember distinctly in the fall of 1854 going forward to be assigned to the various classes. The classes were divided at that time into three sections, H—1, H—2, H—3, and the selection was made alphabetically, so that I found myself in the third section of the class. Professor John S. Hart was at that time the principal of the school, and we assembled in the large lecture-room on the north side of the building every morning. The principal read a chapter in the Bible, and we then filed out to our respective class-rooms, according to the roster for the day.

"The new students were assigned, as a rule, to Professor Daniel W. Howard, who endeavored to sort out the good from the bad, the wise from the foolish, etc., and instructed us in ancient history of Greece and Rome, and also in English history. I remember distinctly the kindness with which he received us all and the interesting classical stories which he read to us from time to time from Macaulay's 'Lays of Ancient Rome.' The daily routine embraced recitations not only to Professor Howard, but also to Professor George Stuart, Professor Hopper, who had charge of geometry, and to other members of the Faculty. Notable among these was Dr. Henry McMurtrie, who gave us a course in anatomy and physiology, and whose kindly manner and interesting subjects had a particular fascination for me at that time. His lecture-room was on the south side of the building, opening on the west to his museum. His lecture-room was different from the others in that it had inclined seats and that he lectured on a platform in front of us without notes and in a most interesting and impressive way. I can recall now with pleasure many of his lectures, and have always considered it a very important part of the course at that time, as it extended over quite a number of years. I was at that time particularly interested in the study of botany, and rearranged the herbarium which he had in accordance with a more modern classification, at the same time spending almost every Saturday in the field, enlarging my own herbarium under the personal supervision of Professor Ennis, who had private classes in botany outside of the school. Later on we were permitted to study under Professor James Rhoads, who was rather severe on the younger students, but before we left the school diminished his severity, so that in the higher classes, particularly as they diminished in number, each pupil felt as though he had a friend in Professor Rhoads. He was

a great believer in Addisonian simplicity, and I think that much of the direct and straightforward letter-writing and speaking of the graduates of the Central High School may be traced to his instruction, and I thank him to this day for what he gave me in the way of an insight into English literature and to proper speaking and writing. To assist us in this matter we had a declamation every day in the lecture-room at the close of the school hours by different pupils selected by him. It was a first-rate training to all of us and enabled us to appear in public with composure and self-possession. Another most interesting professor to me was Dr. Edward W. Vogdes, who supplemented his instruction from Upham's 'Mental and Moral Philosophy' with some lectures on various mental conditions, and which he made most interesting. Professor E. Otis Kendall was the Professor of Mathematics and Astronomy when I entered the school, and subsequently resigned to go to the University of Pennsylvania, when he was succeeded by Professor James McClune. I have only the kindliest recollections of Professor Kendall, whom I had occasion to see later in life, and I think that all the pupils who passed under him will testify to his uniform urbanity and geniality. Professor Martin H. Boyé was at this time the Professor of Chemistry and Pneumatics and gave us our elementary ideas on these subjects. The drawing department was presided over by Professor Alexander J. MacNeill, who was a very handsome man, and who was certainly very facile with his pen and pencil.

"I took the full four years' course, embracing Latin and Greek with Professor Haverstick, whose quaint appearance and old-fashioned ways rather charmed us, and from whom we took our Cæsar and our Sallust, and Virgil and Horace, together with Xenophon and Homer. The French language we had from Professor François A. Brégy, who I think possessed to an unusual degree the ability to teach large classes a modern language. As soon as we got over the rudiments he adopted the plan of dictating from the celebrated French authors, and although the class was large he succeeded in getting good results from it. He associated with this matter of dictation a good deal of blackboard work, and it seemed to me we all derived a high degree of benefit from it. After having dictation for fifteen or twenty minutes to the whole class he would send up a dozen or more to the blackboard to write out on it just what they had written from his dictation. Then another set were sent up afterwards to correct what the first had written, and this was re-

peated until the last quarter of the hour, when he went over all the blackboard work, showing the errors made by each of the sections. It is a very difficult matter to teach a modern language to so large a class, and the more I have thought over it in later years the more I have thought how successful Mr. Brégy was in his instruction. I had taken private lessons in French from Professor Brégy before entering the High School, and also from Professor H. Magnin, so that perhaps I had to some extent advantages over some of my fellow-students. This, however, was not the case with the German language, for there for the first time I was introduced by Professor F. A. Roese to the beauties of the German language and literature. I supplemented my lessons in German in the school by private lessons with Professor Roese, which continued over a long period. I got to know him very well, and found him to be a most cultivated and agreeable companion, and I recall now with much pleasure the time spent with him in reading Schiller and Goethe, to say nothing of some of the minor poets. Stephen W. White, of the Thirty-first Class, was a student with me in these private lessons, and was the most apt of any of us in acquiring the German language.

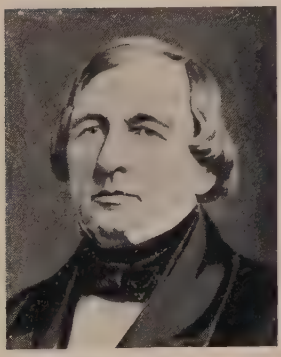
"I have given in a hasty and cursory way the reminiscences of the courses of study as presided over by the various members of the Faculty in the period from 1854 to 1858, and I imagine that the customs of the school have not very materially changed, in that we had periods of five hours, each of which was devoted to lectures or recitations, and that we went from one class-room to another in a body. At the sound of the bell we assembled in the respective class-rooms, at the second moved out, and at the third stroke were supposed to have reached the recitation-room. There was not much studying done in school hours, most of the time being taken up by actual work in the way of reciting and taking notes of lectures, and most of the preparation for the next day was done at home. It was rather a busy life, although from my previous training in the English and classical schools I found myself more at home in the High School than some of my classmates. This enabled me to supplement the study of the school by private lessons in French and German, as I have already spoken of, and also to attend the Philadelphia School of Anatomy under Professor D. Hayes Agnew, and also to go to the various hospitals on Saturday to see the great operations in the amphitheatre. My father seemed to consider that this was an essential part of almost any boy's education at that

B. HOWARD RAND

ALEXANDER J. MacNEILL

LEWIS ANGELÉ

FREDERICK A. ROESE



JAMES McCLUNE

EDWARD W. VOGDES

time, and I must confess that I was very much interested in the studies connected with anatomy and physiology, as well as in natural history generally. The importance of this training for the mind is pretty hard to over-estimate, as it supplemented the excellent instruction given in the High School in the foreign languages and in English composition. During the terms we had declamations of original compositions by pupils selected for the purpose by Professor James Rhoads from those who appeared before the other students from day to day in the lecture-room. I remember distinctly that on one occasion a young gentleman named T. Edwards Converse not only prepared a poetical composition on a subject given after we had entered the room, but committed the same to memory and delivered it to the audience, notwithstanding the annoyances incident to such an assemblage and notwithstanding that he wrote his composition in the immediate vicinity of the orchestra provided for that occasion. Of course, Professor Rhoads did not impose upon the good nature of the audience by inviting very young students to take part in these declamations, and if I recall correctly, it was not until we had been in the High School for several years that we were permitted to compete for these exercises. They all, however, led up to the final Commencement Day, and the training that we received in this connection has been of service to many of us in after-life who have had occasion to speak in public, and who never fail to recall some of the rules given us by Professor Rhoads in reference to this matter.

"The new High School building was such an improvement upon the one on Juniper Street that it was looked upon with more or less pride by the School Commissioners, and particularly the principal, John S. Hart, who delighted in taking visitors over the building and explaining to them the various good points, particularly the system of ventilation, which we thought was a great improvement over anything that we had ever seen before. Professor Hart at this time not only administered the entire school to the great satisfaction of the Board of School Controllers, and also of all the students in it, but he instructed some of us in Latin grammar and was an excellent teacher besides, being a man of very decided ability and with an administrative faculty which I have seldom seen surpassed. It was no slight task to successfully carry out the daily routine required and at the same time maintain in thorough efficiency all the various departments of the school and to keep in harmonious working all the members of the Faculty. I think of him now with pleasure and

recall his administration as one of fairness and justice, and I recall the deep interest which he seemed to have in almost every one of the students with whom he was brought personally in contact. His son, and now Professor James Morgan Hart, of Cornell University, shows the effect of his father's training and association in a marked degree, and especially in his advocacy of having English properly taught in all the schools of New York State and of increasing the number of hours devoted to the study of this important subject.

"Several of my intimate friends when I was in the High School were at the same time in the Department of Arts of the University of Pennsylvania. We were accustomed to meet frequently and compare notes and see what were the differences between the two institutions of learning, where one was strong and the other weak. I was entirely satisfied at the time with my father's choice in sending me to the Central High School of Philadelphia; I have never changed my mind in this respect, although of course the Department of Arts of the University of Pennsylvania to-day is a very different thing from what it was at that time. There are, however, advantages in each institution from the rubbing together of a large number of young men, and both the High School and the University have, of course, these advantages in common. I have always felt that the course of study of the High School was a good one, and that, so far as its bearing upon my every-day life was concerned, it had a marked influence, particularly in Professor Rhoads's department of English literature, and also Professor Roese's department of German literature. I may say I have never gotten over the advantages which I had from both of these gentlemen, to say nothing of those from Professor Brégy, and the elementary classical education which I received from Professor Haverstick. These courses were particularly strong during the four years that I was at the High School, and I think that they had as much effect upon me in my after-life as any in the school. The study of natural history under Professor McMurtrie, and to some extent that of chemistry under Professor Boyé, also contributed much to my happiness then and in after-life. The chemistry, however, was given under adverse circumstances because of the lack of laboratory work. The other strong courses were the mental and moral philosophy and political economy under Dr. Vogdes, although they were unfortunate enough to use as a text-book Wayland's 'Political Economy,' which was so unsuitable to a Philadelphia atmosphere or to the sons of Pennsylvania at large. Though students, we did not accept Professor Way-

land's conclusions, and were quite able, in our own opinion, to give very good reasons for not doing so.

"The weakest part in the course of study when I was there was the higher mathematics, and perhaps that was thought to be less important, as the Astronomical Observatory could not be used at that time owing to the vibrations which prevented the use of the Observatory to as great a degree as in the old High School building. Had I not supplemented these courses by study at the Rensselaer Polytechnic Institute at Troy I would have been sadly deficient when I came to use them as a civil engineer.

"In looking over the list of students in the Thirty-second Class, I find comparatively few that are now living and known to me, but this is not to be wondered at, as I have been away from Philadelphia for so many years, but I always kept up an intimate relation with A. Graham Elliot, who died so suddenly a year ago, and to some extent with Clement A. Griscom, with whom I was associated at the Northwest Grammar School and for two years at the High School. As you may be aware, I had the salutatory address on completing the course at the Commencement in 1858, standing No. 2 in the class. Mr. Edward D. Ledyard, Jr., who was my close competitor during all the four years, had the first place as valedictorian. I have never seen him since the day we graduated, but I recall with pleasure his frank face and his delicate sense of honor and how good friends we were through all those years although neck and neck in the race. Of William McMichael and Horace McMurtrie and John H. Oberteuffer I have seen very little, although on the most friendly terms with them during the course. My old friend of long standing, Joseph R. Rhoads, did not graduate with us owing to a severe illness which prevented him from attendance with the class, but I am sure that he will bear out many of my statements and recall very many of the incidents alluded to in these reminiscences.

"The High School did for me just what my father wanted it to do,—viz., wake me up to a right sense of the importance of what I was doing, and I feel grateful to him for it, and I have always been an advocate of the public schools and have sent my own sons to them, although I have supplemented their education by sending them to technical schools as I was sent by my father. I believe in the public schools, and in this New York State, where the course of study leads up to higher education in colleges, technical schools, and universities, they are able to give most capital training in nearly

all the high schools of the State. The position of the Central High School in Philadelphia is so well known that I need not say anything on that score here; but it presented in my time, and I suppose it does still, a very different course of study from any of the high schools in New York State, for instance, or in other States modelled upon the New York system of education. This position has been accorded to it by the United States Commissioner of Education and by the various university clubs of the country, who admit its graduates to their membership on the same basis as colleges having the same courses of study.* The present view of educational matters is that the 'High School' as a name is a misnomer, yet the associations connected with it are such that any of its old graduates would deprecate a change. My course at the High School of four years permitted me to enter the Rensselaer Polytechnic Institute at Troy and to shorten the course by one year, so that I graduated from that institution in 1861 with the diploma of a civil engineer, although the course of study at that time usually required four years; thus, entirely independent of the mental training received at the High School in the four years I was a student, I received almost immediate benefits on entering the technical school, as above. The course at Troy was so entirely mathematical and bare of any literary courses whatsoever that I owe to the Central High School of Philadelphia all of my literary tastes and proclivities, which have been a source of much pleasure to me all my life. In 1890 I was elected by the Legislature of New York State as a Regent of the University, a life position which I still hold, and which was made possible for me entirely by my predilection for literary and educational matters, and which has given me opportunities for observation since in this connection which are unusual.

"T. Guilford Smith."

No one of a very loyal Alumni has shown a stronger feeling of attachment to his old school than George Alfred Townsend,—poet, novelist, and journalist,—whose writings have made the name of "Gath" familiar to two generations. He was a graduate of the Thirty-fifth Class, and his reminiscences of his school days cover

* In Buffalo and New York, but not in Philadelphia.

the latter portion of Professor Hart's administration and the first year with Professor Maguire.

"I had been privately schooled at Chester County, Maryland, and Newark, Delaware, for four years, and was better prepared to pass the High School examination than boys generally from the grammar schools, which I impute to the more even social picking of academy and boarding-schools. However, my teacher at Penn Grammar School, Philadelphia,—Edward Gideon,—was in character, temperament, and high, duteous spirit a model for teachers. He hoped I would pass in high and make up for the but moderate success of his classes from that outer suburb. I find in an old diary at January 2, 1856: 'All my thoughts are bent on one thing,—to reach the High School.' The second day of the grammar school examination, January 8, I record as 'the coldest day for thirty years; father's ears frozen.' Saturday, 12th, I record, 'Skated on the Delaware. A grand fight on the ice between the Bed-bugs and Snappers.' Monday, 21st, 'My grammar average eighty-two; if I fail to get in, nothing is left but to go to work. At night Gideon had a fight with the Night School boys.' Then a week was left to burnish up for the grand trial of Monday, January 28, and Thursday, February 7, between which dates came my fifteenth birthday. I went to the globe-capped edifice of brick and each day recorded my hopes and fears. Friday, February 1, 'Vowed this morning that if I were allowed to enter the High School, I would forsake everything but my studies, and be a better boy. Father promised last night that if I succeeded in getting in I should go four years.' Monday, February 4, 'A boy detected in cheating.' February 6, 'The algebra examination utterly unfit for boys so little prepared as we are.' Saturday, February 9, 'Admitted to the Central High School to-day about one o'clock; average 75.5. Number sixteen in one hundred and forty-two admitted. The greatest day in my life.'

"I recollect that I was mixed with some other boy's number and admitted far down the list, and then recalled to the Faculty room and set in my right place. Professor Hopper's characteristic smile when he rectified the mistake is perfectly visible to me yet.

"The third day that I was in school and copied on the blackboard a part of my composition, Professor Rhoads came to it, chalk in hand, and after reading three or four lines, exclaimed in his leonine way and almost roar, 'That composition's copied; cipher!'

"Nothing follows in my diary at this unjust cutting down. I

suppose the blow was too crushing for any comments. But in 1869, after I had become a generally known writer, I find the comment in brackets in the old diary: 'This Professor Rhoads was so sure my composition was not original that he said so, and marked me cipher or zero. Yet it was entirely my own.' Professor Rhoads was just enough for the Freshman race of that day, and I afterwards owed him strong recognition. But my average that month was only sixty in composition for writing above my age. An addendum in the diary thirteen years later says, 'God knows I was too vain to copy anything.' The discouragement could not have been long, for May 3rd I enter, 'Bought a quire of foolscap and commenced *writing a book*.' At the end of the term I won a testimonial and stood second only to George A. Wilt, the most dogged scholar in our class.

"After the first year I made no effort to keep near the head, confining my attention to a few studies and much miscellaneous reading. As in colleges, so in high schools, are incorrigible boys, who are allowed finally to do what they please in virtue of some declared merit.

"Professor Rhoads was a typical Quaker Pennsylvanian in regarding literary fineness as either an affectation or a cheat. Candor, 'the plain language,' was in him explosive as in an honest bull. He was a lover of poetry and had the merit of approving Whittier when 'abolitionist' was a term like 'infidel,' as it used to be. I felt the strength of the man. His system of teaching composition absolutely debarred a certain short series of words from use under penalty,—such words as *you*, *very*, *a great many*, and *a great deal*. To write around those words in a sort of literary hopscotch required ingenuity, but it also, probably, suppressed a certain freedom of style. 'Thou shalt not' is a discourteous way to have men love God or letters. 'Please do not kill, covet, or steal' expressed just as much.

"The French professor, Brégy, compensated me for my rebuff. He one day said, when I held up my hand to go out, 'Yes, Townsan, go out; Townsan is de only boy in de school dat speaks originall speeches. De odar boys say deirs is originall, but Townsan's *are* originall.' This compliment made before the whole class was as sweeping as it was kind. I suspected that I owed it to a recent speech I had made in the lecture-room before the six hundred on the Balaklava plan, against religious bigotry, all of which I recall is the sentence, 'Thomas Paine's honest efforts for American liberty forgotten or disowned.' I was also a preacher's son. The reactions

of the world begin within the pale. We surely are more justified in disliking what we have seen than what we never knew.

"A noble instance of a religious man without intellectual hatred was John S. Hart, the principal. Why not have called him 'President,'* I may say, for that collective Faculty of 1856 was worthy of a college. Every man in it worked out his task with rare fidelity. But above them all shone out the pure face, purpose, and character of Mr. Hart like a man from a higher walk. He seemed fit to be president of a nation. He never paid me any compliment, but I felt from his literary employments that he was in sympathy with my intents, and after I graduated, when he collected material for his book on American Literature, he came to me and said that he wished to include in it a short biography of me. I made a poetical address when he retired from the school, which MacNeill, our carefully attired and punctilious writing and drawing master, properly said to me privately was in very bad taste in that it made a pun, if a Shakespearian one, upon President Hart's name:

'The blood still strives the brain to fill,
But ah, the active Heart hath left.'

"Taste, however, is an acquired *taste*. Most of us then were poor democratic boys who ate with our knives and had more family prayers than fine examples.

"After Mr. Hart left the school the professors quarrelled among themselves for want of a resolvent. At the top of all great schools must be the gentleman.

"Professor Maguire, who followed Mr. Hart, was the kind, tolerant, affable ex-principal of a superior grammar school. But his coming in from below to control professors who had themselves been hopeful of the control was a species of favoritism in the Board of Controllers and not wise; and it let loose the religious issue, which was started by Lujeane, an Italian, also unwisely taken in; and it was Italy against Rome, and the public society, which often notices too promptly the human perversions of a band of teachers, backed the Board of Controllers to retire all the disputants, and Mr. George Riché, who had been a Controller and was an accomplished person, especially in public speaking, was the last of three

* After the organization of the Faculty in 1851, the title President was used, although not exclusively until 1874.

Presidents with whom I had acquaintance. He presented me to an audience at Concert Hall early in my career as a lecturer.

"Among the professors who seemed to me to be of special mark were B. Howard Rand and Dr. McMurtrie. I think we had too many studies and too much recitation, and that judging of one's scholarship by the average of all the collective studies was not a fair test. After a certain probation listless scholars in some lines might have terminated those studies and rallied upon those in which they excelled. This was the real discipline. Professor McClune, who taught the mathematics, always passed Henry Brock and myself with a mock question and marked us as high as he could, amidst the laughter of the class.

"I regard the last two years of my course at the High School as a university fellowship, the expense of which my father paid. Sometimes I think that the supreme effort to attain the High School from below gives the boy's life a spirit of energy which tells upon his subsequent life. Three fine institutions are in Philadelphia,—the University, itself once an academy or high school and the emanation of the founder of the Presbyterian academies about Newark, Delaware, New London, and Fagg's Manor,—Rev. Francis Allison,—Girard College, and the High School. Franklin's descendant, Alexander Dallas Bache, was the first President of the High School, taking his prænoms from the literary factor of the first company of Philadelphia actors, and Franklin had a hand in the University foundation, while Girard was the least servile-minded merchant in our history. I heard Mr. Bache, afterwards the eminent head of the Coast Survey, speak at some High School anniversary in the Musical Fund Hall; he was a large, wholesome representative of the physics which has succeeded the prophets.

"While writing papers on the High School about 1857, I asked Professor Kirkpatrick, who kept the records, which graduate of the institution had reached the highest worldly mark. He named Ignatius Donnelly, as having become lieutenant-governor of Minnesota, a gentleman I afterwards knew in Congress and visited at his home, Hastings, Minnesota, and read his tales, 'Atlantis' and 'Ragnarok.'

"The literary wish or attempt caused a little club of five members, called the Quill, of which I was one, to be formed, and to meet weekly at the house of George Wannemacher, a student. Other members were Harrison Allen, afterwards a Professor in Natural Science, and C. Harry Brock, who married Mr. Wannemacher's sister. Brock was a natural orator and a superior writer, besides

being a handsome man of the classical Byron type, with curling black hair upon a fine forehead. He and I began to debate at the grammar school, and he was a fine encourager of others as well as the most popular orator, perhaps, in the lecture-room. Others were, at that period, Jacob Ring, E. C. Mitchell, Mr. Haines or Hayne, afterwards a clergyman, and W. H. Lambert, still living. A pair of speeches which Joel Cook and I made towards each other, his in humor and mine subsequently in temper, were the cause of an order, issued by Professor Hart, that all original speeches must thereafter be examined by the Faculty before their delivery. Mr. Brock died early after entering the bar.

"An incident of a mystical sort recurs to my memory concerning a lad in my class of a peculiar appearance and temperament, so *outre,* indeed, as to make him the innocent butt of his classmates. He was so treated in a manuscript class paper which I wrote out from week to week and slipped around the class after recitations, the name of which was *The Eagle Eye.* Several times as we exchanged class-rooms in the general rush (a system open to improvement, I think) this paper, of the size of a sheet of foolscap, was extracted from under my vest with a sleight of hand which puzzled me, but finally I caught my classmate in the act of taking it thus insidiously, and the expression upon his countenance was that of hatred or terror of the object he stole. I also observed that he could do tricks against the professors he disliked, such as our philosophical chemist, Professor Boyé, who had many of the national qualities of the Dane, among them suspicion and retaliation. As a bean-thrower our classmate was a clean wizard. Once he came to the school scared, scarred, and patched, and with his watch in a handful of dissected parts; robbers had attacked him coming to school and he was the subject of wondering sympathy. It was almost overlooked that at the time he had run over the 'fifty notes,' or bad marks, which constituted a 'special offence,' and required one's father to be produced at school to promise reform or his son's suspension. We feared our fathers more than we obeyed the Faculty.

"I was taken aside one morning before the iron gates opened to let us into the yard by a young gentleman of a higher class named Mitchell, who requested of me to tell him something of the nature of the boy I have described. I asked his reasons. Master Mitchell said that he visited in the family of Dr. Hare, the eminent chemical teacher and apparatus inventor, and that Dr. Hare had become so intensely interested, if not 'converted,' to Spiritualism that his

family feared he was the victim of his medium, who had while under the 'influence' tossed up stoves and 'did many wonderful works.' I then learned what the whole class was ignorant of, that my butt, who so feared a publication, had for some time travelled in Canada, etc., with Dr. Hare, doing the medium tricks which seemed to the lecturer, Hare, and his audience to be little less than supernatural.

"I told Mr. Mitchell that I believed my classmate to come from the devil and to do his works. Thus, in a school of six hundred boys, are to be found all the varieties of settled character.

"My enforced walk, through want of money and of street-cars or stages, of four miles daily for two hundred and forty days in the year to and fro, or near four thousand five hundred miles,—I lived in South Penn, Cohocksink, and Kensington,—was equal to a fifth or sixth of the earth's circumference. I had a tendency to throat and pulmonary disease, and learned to throw my chest out, and often used a sort of stop-cock inhaler, which my father had, to arrest the breath upon the lungs. For over forty years I have had a strong constitution.

"*The High School Journal* was founded in May, 1857, the result of a circular issued by 'Graduates,'—its only office a box in Blood's Dispatch. Not much original matter appeared until July, when my first composition, a speech in verse, appeared in Number 3, and a personal to 'try for the prizes.' The next month I was taken in as sub-editor, having meantime learned that the proprietor's name (George Nathaniel Townsend) was nearly my own name, though he was no connection of mine. Having responsibilities in the paper, I altered my relation to 'Editorial Correspondent' and began to write my full name.

"The 'Literary Congress,' started that winter, had a certain contemporaneousness with *The High School Journal*, and the Shelley and the Bryant Literary Institutes were started by me. The paper also got us the free entry to the theatres. Among Mr. George N. Townsend's assistants were O. D. Martin, H. C. Lukens, Edward Craig Mitchell, and Charles Henry Brock.

"Mr. G. N. Townsend, afterwards unfortunate, was to me a most friendly and partial assistant to seek the ways of the press. The paper for a while became a weekly under the name of *The School Journal*. Its best influence otherwise was to touch the spirit of literature and give a local emphasis to the High School.

"*The Bush Eel*, of which a few numbers appeared, was more rapturously hailed in the school, ministering to the delights of mis-

chief. It emanated from some class above mine. Subsequently, Adam Everly, who was in a different division of my class, revived the character of *The Bush Eel* in a small sheet called *The High School Reporter,* to which Brock and I contributed. It contained some clever travesties upon Professors Rhoads, Boyé, and Edward Vogdes. As every boy who was found reading these pages was warned of his immediate expulsion, the cold sweat sometimes broke upon our brows. Mr. Everly had left the school before he launched his paper.

"Base-ball became an institution whilst I was in the High School, and Wilkins of my class was in the earliest professional teams.

"To show that our High School letters of that day were not beneath collegiate credit I will mention the fact that two of my poems which I recited, or 'spoke,' in the lecture-room were afterwards joined together and sold, after I entered the press, to the class poet of an old and distinguished college as his original composition upon the valedictory occasion.

"When I was about to graduate, without any fixed purpose for the future, a Mr. Child, who had passed out of the school some time before, came to see me at the Alumni meeting and invited me to join the newspaper staff of *The Inquirer,* which was soon to be modernized by a member of Class No. 1 of the High School, Mr. George Harding. I owed this happily embraced opportunity to my writing and speaking while a student, and in no other way that I can think of would I have become so promptly started upon the press.

"The Controllers of the school I sometimes came near, as well as their clerks, in their building upon Washington Square. They seemed to me to be worthy, conscientious officers of the city, and of address equal to their character.

"George Alfred Townsend."

So, from a leader in public affairs, from one successful in the larger concerns of business, and from a journalist and littérateur who has made permanent contributions to the world's thought come testimonies to the useful life and wholesome tone of the school in these early days.

CHAPTER IX

NICHOLAS H. MAGUIRE AND THE CIVIL WAR

The resignation of John S. Hart committed to the Board of Controllers a most delicate and responsible trust, in the selection of a successor. There was no lack of qualified candidates, six well-known teachers having filed applications for a position which was well recognized to be the most important in the public school system of Philadelphia. Two members of the Hart Faculty were among the aspirants, and it is probable that the election of either would have continued the earlier traditions of the school. There were three applicants from outside of Philadelphia, but the name which found favor with the Committee was that of Nicholas H. Maguire, A.M., one of the most successful of the grammar-masters of the city.

Professor Maguire was then in the prime of life, in his forty-fourth year. His early training was obtained at a school in Frederick, Maryland, and later he was graduated from Mount St. Mary's College, where he afterwards obtained the degree of Master of Arts. His tastes led him naturally to the teacher's life, and during his young manhood he taught in several private schools in and near Philadelphia. In 1842 he was elected principal of the Coates Street (afterwards Hancock) Grammar School, and there he served until his election to the

High School. During this period of sixteen years he was in the forefront of the city's teachership. Gracious in his bearing, kindly and sympathetic in his manner, approachable to even the most humble, he made many warm friends among his pupils and their parents. And as one of his pupils was serving in 1858 as chairman of the High School Committee, it may well be appreciated that his case did not suffer for lack of effective presentation.

The promotion of an efficient administrator of a lower school to the principalship of the High School was criticised by some on the ground that success in one field was not of necessity evidence of ability in another. Prior to 1858 four of the teachers of the High School had prepared for their work by teaching in the elementary schools, and some of the most distinguished members of the Faculty are included in this list. The ambitious grammar-master was at the top of his profession, unless he could win advancement in the High School. But, on the other hand, it was felt by many that the members of the High School Faculty should be specialists, each trained in his particular line. It was from this point of view that the appointment of a principal whose experience had been acquired with younger pupils was criticised.

Nevertheless, the election of Mr. Maguire can be defended on wise and salutary grounds. Dr. Bache and Professor Hart had given impetus to the whole school system, and by brilliant initiative had introduced ideas and methods of great value. But it was felt that the next stage in development should be devoted to unifying and coördinating what had been so successfully origi-

nated, and in this work one who knew the elementary system intimately was better fitted for the leader's part.

This argument prevailed, and on December 14, 1858, Professor Maguire was elected principal and served for eight years, until July, 1866. This administration comprised the stormiest period in the history of the High School, and is the least pleasant for the historian to contemplate. The Faculty was not harmonious, cliques having been formed among the professors; the High School Committee changed its membership frequently and there was no stability in its policy; the principal was not able to do his best work, and hence grave doubts as to his competency arose; politics continued to play an important part in the management; and, worst of all, there was a captious and bitter spirit shown by all concerned that led to personalities of the most flagrant type. Over all these details, except in so far as is absolutely necessary for coherence, let time draw its veil.

The changes in the Faculty were quite frequent, eleven professors and one assistant having been elected during this period. Before the inauguration of the new President, Professor Brégy resigned from the chair which he had filled so well to accept a professorship at Girard College. His successor was Georges Gérard, A.M., a native of France, who taught in the High School for almost three years. If he had understood the American boy, Professor Gérard might have been a successful teacher, for his ability in other fields was unquestioned. Like many teachers of foreign nationality, however, he was the victim of the plots and pranks of the mischievous, and this detracted from the value of his work at the school. The school papers of this period record that in

NICHOLAS HARPER MAGUIRE
Principal, 1858–1866

the judgment of the boys he had one serious fault,—a propensity for "noting," and sometimes the wrong fellow!

Early in 1859, Professor Boyé resigned because of ill health, and was succeeded by a graduate of the High School of the Second Class and a distinguished scientist, Dr. B. Howard Rand. He was an alumnus of Jefferson Medical College, and had lectured on chemistry for ten years as a member of the Faculties of Franklin Institute and Philadelphia Medical College. Dr. Rand's service in the High School was short, from 1859 to 1864, but he is remembered as an efficient teacher, whose thorough mastery of his subject won for him the respect of his pupils.*

Shortly after Dr. Rand's election the Controllers determined to reintroduce the study of German, and the professorship in that subject was first filled by Romain Lujeane, an Italian by nativity, whose residence in Germany for several years had given an adequate knowledge of the language which he was now appointed to teach. This selection was unfortunate, in that it aroused the enmity of the German-Americans, who form a large and potent element in the city's population, and who

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*In 1862, John Kingsbury, LL.D., formerly Superintendent of Schools in Rhode Island, visited the High School, and reported: "We were particularly pleased with the chemical laboratory, not with the room, or with the chemicals, or apparatus, but with the unmistakable evidence that there was work done there. In most of our colleges there is very little practical knowledge of chemical experiments given to the students. Here, however, we were informed that the chemicals were put into the hands of the pupils and they are taught to perform the experiments themselves."

united in a mammoth protest against the selection of an Italian to teach German.

This led to Mr. Lujeane's retirement, and after a competitive examination conducted with great care, Lewis Angelé was elected to fill the chair. The new incumbent was German by birth and a graduate of the University of Tübingen. He had lived in America for fourteen years, and had won an excellent reputation as a teacher of ability. For about the same period, until September, 1874, he taught in the High School, and made friends by an honest simplicity of manner and a kindly heart.*

Within a few months after Professor Hart's resignation Mr. Williams resigned his assistancy to enter upon the study of law, and in his place came Jacob G. H. Ring, Jr., a graduate of the school of high standing, who had been teaching for three years in country schools. At the close of 1861 three changes were made in the Faculty. On account of old age Professor McMurtrie resigned the chair that he had filled so honorably and well, and at the same time Professors William Vogdes and Georges Gérard were retired. It is greatly to be regretted that even yet there is no comprehensive pension system among the Philadelphia teachership, whereby those who have served faithfully and efficiently may win honorable retirement. Until some adequate plan of pensioning is introduced the system will always suffer from superannuation, for the sympathy of Alumni will keep teachers

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* One of his amusing methods of teaching the pronunciation of the German letters was as follows: "Make a round mouth as if you were going to vistle (but do not vistle), and then say 'e.'" Of course somebody would invariably whistle.

in position, even to the detriment of the service. This has been illustrated several times in the history of the High School.

These new vacancies were filled by competitive examination, conducted by experts in the various fields,—a favorite method of the period, and one that has many commendable features. Certainly at this time it gave to the school three highly inspiring and cultured teachers, whose service in the Faculty was helpful, useful, and efficient. Professor Brégy won the succession to Gérard and returned to his old chair. Dr. McMurtrie was succeeded in the professorship of Anatomy, Physiology, and Natural History by Henry Hartshorne, a graduate of Haverford and of the Medical Department of the University of Pennsylvania. Dr. Hartshorne was an illustrious scientist and an excellent teacher. During his career he held professorships at the University of Pennsylvania, Haverford, Girard College, Women's Medical College, and Pennsylvania College of Dental Surgery. He rendered great service to medical science by his experiments upon the use of chloroform and by numerous scientific writings. His stay at the High School was not long, covering the period from 1862 to 1867, but when he resigned to accept a similar position with his Alma Mater, there was sincere regret at the loss of a teacher whose ability, refinement, and scholarship had added materially to the progress of the school.*

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* Dr. Hartshorne died February 10, 1897, at Tokio, Japan. At the funeral services the closing prayer was offered by Rev. A. A. Bennett, of the Fiftieth Class, Central High School, who is a missionary stationed at Yokohama, and who hastened to Tokio to pay a tribute of respect to his teacher of thirty years before.

The third of the new-comers in the Faculty was Joseph W. Wilson, who had been graduated from the school in 1855. A seven years' experience as a teacher at Germantown and as principal of the Norristown High School well qualified him for his work, and he served the High School with fidelity and efficiency until his death in 1880. For sixteen years Professor Wilson held the chair of Mathematics, but in 1878 he was transferred to the department of English Literature, which had been his principal avocation during his teaching life. He was one of the most highly respected of the later Faculty,—a position won by an exemplary devotion to the work which he so highly esteemed and by a kindly modesty of demeanor which was a sign of the true worth of the man.

In the autumn of 1862, Professor MacNeill resigned, to seek a less sedentary employment; but before he had started on the new career that had opened to him, his health broke, and within a few weeks of his resignation his former colleagues were called upon to mourn his death. As a result of another competitive examination, Joseph B. Beale, who had just been graduated from the school with the Thirty-ninth Class, was elected Professor of Drawing and Writing. Professor Beale was an artist and an expert illustrator, and won his position through his natural talents. His service at the school continued until the reorganization in 1866, and since that time he has devoted himself, with marked success, to painting and to artistic illustration.

A well-earned change in grade was brought about in May, 1863, when Mr. Howard and Mr. Ring, who were teaching History and Latin respectively, were admitted to the Faculty as professors in these subjects. When

Professor Rand resigned in 1864 to accept a professorship in Jefferson Medical College, another examination was held, as a result of which Lemuel Stephens was elected Professor of Natural Philosophy and Chemistry. A graduate of Harvard, equipped with years of study at the German universities and with almost thirty years' experience as a teacher of science at several collegiate institutions, Dr. Stephens might well have been expected to attain to great usefulness in the High School Faculty, but he too was a victim of the reorganization of 1866.

Such, then, were the changes in the teaching corps during Professor Maguire's administration. Most of the appointments were the result of competitive examinations, by which system teachers for the High School have occasionally been chosen. While much may be said in criticism of such a method, yet it gave to the school at this period some excellent men, who fully maintained the traditions of fidelity, service, and loyalty to the public school system.

The curriculum of this period underwent but slight modification. Professor Maguire was not wholly in sympathy with the course of study which his predecessor had arranged. It covered a wide field, but it lacked in thoroughness. Therefore the few changes at this time were made with a view to increase the efficiency by preventing an undue scattering. Then, too, Professor Maguire did not share in Professor Hart's keen interest in educational experimentation, so he pursued no novelties. In his first report the new principal criticised the study of phonography, the benefits of which, in his judgment, were confined to less than five per cent. of the students, and he advocated a strong course in bookkeeping

in its stead. In 1861 there was a distinct lowering of the standard, when algebra was dropped from the list of entrance requirements and hence from the elementary curriculum, not to be taught in the grammar schools for thirty-five years, when it was reintroduced at the suggestion of Dr. Edward Brooks. There was a continuous pressure from the grammar schools in favor of a lower standard for entrance to the higher school, and in a measure this reacted unfavorably upon the High School course. Among the grammar-masters there was a keen rivalry over this examination, to which added zest was given by the expectation that those who prepared most successfully for the High School would in time be called to the higher school work. The editor of *The Ohio Educational Monthly* found much to criticise when, in 1865, he inspected the Philadelphia educational system, and the "cramming" in the elementary schools, in order that a large proportion might be admitted to the High School, won a scathing rebuke. Perhaps an equal evidence of educational retrogression may be taken from the minute-books of the High School Faculty. In 1864 the Faculty resolved that a return to an elective system would be ill-advised and injudicious. Thus the school which since its establishment had taken the initiative abandoned the principle with which to-day educational progress seems allied.

The discipline of the school was, perhaps, on as high a plane as could be expected during a period of strife marked by internal dissension in the government. Professor Maguire was popular with the students, who welcomed the principal as a friend and even as a playmate as well as a director. The chief student difficulty of

the period arose out of the graduation of the Thirty-third Class, which occurred in February, 1859, when the new principal had scarcely learned the routine of his duties.

The controversy over the election of the orator and poet for the farewell to Professor Hart had stirred up a feeling of restlessness among the students. It was a transition period in the life of the school, and the new administration was as yet but faintly in touch with many elements of the school's life. Recess meetings were held by the older boys and discipline was in a generally uncertain condition. It was just at this time that the members of the graduating class raised the question as to the number of Commencement tickets which they should receive, —the demand being very great for admission to what was then one of the most eagerly looked for events of the year.* The question of distribution was referred to the High School Committee, whose chairman at that time was Washington J. Jackson. The students requested that they might receive fifty tickets apiece, and a respectful petition to that effect, signed by the whole class, was presented to the High School Committee; but when the leaders of the class called upon Mr. Jackson, the personal interview led to difficulty and finally open rupture, and it is even recorded that the students were forcibly ejected from Mr. Jackson's office. To the independent and ebullient High School boy, who upon Commencement is apt to consider himself a potentate of considerable importance, such an insult was not to be endured. Presently

* At one of the earlier Commencements in 1849 there was a considerable panic at the hall on account of the demand for admission.

the graduates were informed that they would receive twenty tickets, and at a student meeting a few days later some of the Commencement orators expressed repugnance to speaking at a Commencement held under circumstances which indicated a total disregard of their feelings and what they esteemed to be their rights. A petition was therefore presented to the High School Committee three days before Commencement, signed by ten of the orators, asking for an additional supply of ten tickets, and stating their firm resolution not to speak unless their wishes were complied with.

There is no question that if John S. Hart had been principal of the school, or if Professor Maguire had had time to become firmly seated, the petition would never have reached the High School Committee, and the whole matter would have been arranged by mutual forbearance and conference; but in the then unsettled condition of the school administration the petition was forwarded to its destination and treated very cavalierly by the governing body. The High School Committee adopted resolutions that the communication thus presented should be returned as inadmissible, and that unless a written apology should be sent to the principal of the school by the parties signing the communication before the hour for Commencement, Professor Maguire would be directed to erase the names of the persons refusing so to do from the list of speakers, and that the Faculty would substitute other speakers; and, furthermore, that the diplomas of the recalcitrant students would be withheld. When the leaders of the insurrection learned of this action by the Committee they allowed two of their number to perform the parts originally assigned to them, because they

were about to pursue higher courses of study for which the degree was necessary, but eight of the group refused to weaken, and the next day when the Commencement was held a new list of speakers took part in the exercises. As a last blow at the Committee, Joel Cook and his brother Richard printed the famous "Valedictory Manifesto." It was set up overnight in a printing-office and several hundred copies were struck off. These were distributed to the public upon the afternoon of Commencement, and we are told that as a result the sympathy of those present was very largely with the insurrectionists. The action of the Committee was carried out and the eight were refused their diplomas; but in a year's time milder counsels prevailed, and the Committee then directed that, inasmuch as these students had completed the course satisfactorily, they were justly entitled to their degrees. One, however, never asked for his diploma: Joel Cook treasures to this day an empty tin case, which is the only official sign of his graduation from the Central High School.

Perhaps the chief solace of these eight recalcitrants was the thought that they were martyrs in a good cause, for this fight led to a more liberal treatment of the graduates in the Commencements that followed.

An interesting religious movement was felt in the school at this time that was probably one of the manifestations of the great revival of 1857, when the Young Men's Christian Association was formed in Philadelphia. A number of the students of the High School, under the leadership of Professor MacNeill, formed a Christian society and held weekly prayer-meetings in a church room near the school corner. In 1859 permission to meet

in one of the school-rooms was asked of the High School Committee, but after careful deliberation the request was refused on the twofold ground that it would invalidate the insurance and that it was inexpedient from the point of view of policy.

After Professor Maguire had become thoroughly acquainted with the school and its problems, he proposed a change in the method of discipline that was in full accord with the kindliness of his own disposition. He did not believe that conduct should be a factor in determining the standing of a pupil. "Progress from one division to another depends upon scholarship, while the right of attendance is determined by conduct." He therefore proposed the abolition of the long-established policy of deducting from the term average the demerit notes for misconduct. When this plan had received the approval of the Committee it was put in operation, and, although it was not unanimously endorsed by the Faculty, there can be no question that it was a change sound in policy and just in equity. Professor Maguire cited the case of one pupil who had attained to a high average for scholarship in every branch, but whose demerits brought his average below the standard for promotion; hence he would have been required to repeat a year's work that he had already thoroughly mastered.

Another improvement which also served the ends of justice was the adoption of a Faculty resolution that "In case of appeal" [from the mark of an examination paper] "the student shall have the privilege of reading and examining his written answers in the presence of the professors." While this custom certainly imposes an extra burden upon teachers, especially from captious and

unreasonable students, it is thoroughly justified by the great good that results from allowing the student an opportunity of satisfying himself that he has been fairly treated. It is to be regretted that in the changes that have come with the expansion of the school this custom has degenerated from a right, guaranteed by Faculty rule, to a doubtful privilege, dependent upon each professor's individual decision.

In common with the entire American people, the school was profoundly affected by the Civil War. As soon as the firing on Sumter was announced there was a patriotic celebration at the High School, concluding with a flag-raising. Thenceforward, upon every possible occasion, there were celebrations and exercises with the view of awakening in the students the keenest interest in a struggle in which so much was involved. There was ample opportunity for this. The early connection between the High School and West Point had led an unusually large number of the school's graduates to the Military Academy, and they were now to be found in every department of the national service. The first regular army officer to be killed in the war was Lieutenant John T. Greble, of the Sixteenth Class, who was killed at the battle of Big Bethel. Not only did the Faculty and students adopt resolutions of regret, but it is also recorded that both officially attended the funeral exercises of this gallant young Alumnus.

As it became evident that the war would not be a mere summer campaign, many of the older students enlisted for volunteer service. In February, 1861, a class of sixty-three was graduated, while five months later the graduating class numbered but twenty-four, and in the

summer of the Gettysburg campaign the graduates were but eighteen. In order to signalize the school's appreciation of the larger interests that were involved in this great conflict the Faculty adopted, unanimously, a rule that any pupil of A or B (the Senior year) who should enlist in defence of the Union should have the privilege of graduating with his class, and if any student of a lower section enlisted, he would be reinstated upon his return. This rule was first utilized in February, 1863, when Joseph Morgan, formerly of the graduating class, who was then an engineer in the United States navy, was given his degree with his fellows.

The members of the Faculty set a good example of patriotism to the student body. During the Antietam campaign Professors Kirkpatrick, Vogdes, and Howard enlisted, and in the next summer Professors Howard and Beale served at Gettysburg. Indeed, the war-fever in June and July, 1863, came very near closing the school, and a general rule was passed whereby students who had enlisted for temporary service were promoted on their term averages, since they could not attend examinations. In the spring of 1864 there was held in this city a great fair for the benefit of the United States Sanitary Commission. Students and teachers united in its support, and not only were collections of money taken up in the classes, but in addition an Evening Declamation Contest was held, to which tickets of admission were sold, and the proceeds given to aid in the Commission's noble work.

With this patriotic interest one can understand the sentiments which led Professor Rhoads to offer in a Faculty meeting on April 13, 1865 (the last session before the Easter holiday), a series of resolutions express-

HENRY HARTSHORNE

JOSEPH W. WILSON

JOSEPH B. BEALE

DANIEL W. HOWARD

GEORGE STUART

ISAAC NORRIS

ing satisfaction at the conclusion of the war, together with a keen appreciation of the illustrious service rendered by the Alumni of the school. With hearty unanimity were these resolutions adopted, and then the Faculty separated upon that holiday, which opened so auspiciously and terminated so sadly for the American people. The next meeting of the Faculty was held in conjunction with the students, to take action upon the death of the "honored head of the government, greatly beloved as a man as well as revered as President." When the funeral exercises were held in Philadelphia on April 22, 1865, the Faculty of the Central High School joined with those who were permitted to escort the remains of Abraham Lincoln.

In his annual reports Professor Maguire refers with proper pride to the active service of the Alumni in the Civil War. The pupils of the High School were found in the army, in the navy and marine, in the line and in the staff. In 1862 twenty took the examination for appointment as assistant engineers in the United States navy, and not one was rejected. In the report for 1864 the principal gives this summary:

"Greble, Wagner, and Waterman, who were sacrifices offered upon their country's altar, were among the most distinguished pupils of our National Military Academy. No one held a more honorable position among the chief engineers of the United States navy than the late George Gideon; and wherever the story of the 'Kearsarge' and 'Alabama' is narrated, the name of Chief Engineer Cushman will not be forgotten. Although it is but twenty-one years since its first graduates left its halls, yet they are found participating in the municipal, state, and national councils. The record will show that hundreds have entered the regular or volunteer service, and won their rank by intelligence and courage. The following is an imperfect list, but it will give some idea of the truth of this assertion:

Assistant adjutant-generals, U.S.A., 3; assistant adjutant-general of Pennsylvania, 1; assistant quartermaster, U.S.A., 1; brigade inspector, 1; colonels, 11; lieutenant-colonels, 7; majors, 9; adjutants, 9; sergeant-major, 1; chaplains, 2; surgeons and assistant surgeons, 37; quartermaster, 1; hospital stewards, 4; paymasters, 3; captains, 42; lieutenants, 69; quartermaster-sergeants, 3; sergeants, 18; cadets, 4. In the navy: Lieutenant-commander, 1; ensigns, 2; surgeons and assistant surgeons, 12; chief engineers, 4; first assistant engineers, 4; second assistant engineers, 14; third assistant engineers, 33; midshipmen, 6; clerks, 6. Marine Corps: Second lieutenants, 3; sergeant, 1; acting ensigns, 2; acting assistant paymasters, 6. Total, 316."

This magnificent total was incomplete at the time of Professor Maguire's compilation, and to swell the list there must be added the privates and also those who served in civilian capacities. One High School Alumnus worked with Dr. Bache in directing the fortifications of Philadelphia in 1863; several were engaged in military and topographic surveys for the War Department. The names of the three hundred and sixteen officers, whose ranks are indicated above, were printed in a little pamphlet, which Professor Maguire had published, entitled "Contribution of the Central High School of Philadelphia to the War," and as an appendix there were given the names of forty-two who had fallen in the struggle, with the fine inscription: "Dulce et decorum est pro patria mori."

From the contemplation of the noble response which the High School made to the nation's need it is sad to return to the petty difficulties that beset the latter part of Professor Maguire's administration. The responsibility for these must be laid, in part at least, upon the Board of School Controllers. Prior to 1867 the Controllers were elected by the sectional school boards, and as a result the

Board was subject to sudden fluctuations in character, due to political changes. Between 1854 and 1864 the leading spirit was Know-Nothing, Democratic, and Republican in rapid succession, and each party felt itself under a peremptory duty to discredit the policy of its predecessor. The Controllers were possessed of a mania for investigating everything, including themselves. In 1858 there was a special inquiry into the cost of supplies and text-books. In the next year there was a cry of "fraud" in the examinations at the High School, and it was charged directly that some students knew of the questions in advance. An investigating committee sifted the matter thoroughly, and found that a student had surreptitiously taken a question-paper from a professor's desk, whereupon the Faculty was declared free of any suspicion of connivance. In 1860 it was charged that some High School professors were in collusion with certain grammar-masters, and had shown to them the entrance examination questions in advance, with the result that the pupils from these favored schools received high averages and the principals were aided in their canvass for the next vacancy in the High School Faculty. In 1862 a special investigation of the High School was ordered, which resulted in a vindication of the principal. A few months later there was a fierce denunciation of a wasteful contract for the painting of a school building. In 1864 the principal of the Girls' High School was compelled to retire as the result of an investigation. And two years later came the reorganization of the Central High School.

With all of this agitation there was a gradual weakening of public confidence in the school system, and this

showed itself in the altered tone of the public press and in renewed battles over the annual appropriation. Early in 1866 there was an attempt in Common Council to strike out the items for both the Girls' High School and the Central High School, and while these motions did not prevail, the minority numbered more than one-third. This vote aided in forcing an examination into the condition of the school. The chairman of the High School Committee, Mr. James Freeborn, who for more than a quarter of a century exerted a strong influence in the management, devoted much time to personal visitations to the school, and he urged a complete reorganization in order to restore harmony. Early in 1866 a special Committee of the Controllers was appointed to investigate every department, and its report recommended that the positions of the entire Faculty should be declared vacant on the conclusion of the current term. With the adoption of this resolution the way was opened for a complete readjustment of the teaching force, and in the reorganization a change in the principalship was deemed expedient.

Thus was concluded a stormy and exciting period, in which the confusion and strife of a warring world found some faint reflection in the little world of school.

CHAPTER X

THE PRESIDENCY OF GEORGE INMAN RICHÉ

In planning for the reorganization of the Faculty, the Committee of the Board of Controllers had recommended that no one connected with the school should be considered for the principalship. A new vitality was needed, and it was felt that this could best come from outside. While the Board had no intention of electing an entirely new Faculty, and in some cases there was absolutely no dissatisfaction with the quality of the teaching, it was decided to advertise extensively for applicants for the vacant professorships. The newspapers of Philadelphia, Boston, Pittsburg, and New York were utilized for that service, probably the only advertisement for an entire Faculty of fourteen in the history of education.

As a result the High School Committee reported thirteen nominations, and on August 27, 1866, the following were elected as the new Faculty of the school:

George Inman Riché, A.M., Principal.
James Rhoads, A.M., Professor of Belles-Lettres and History.
James McClune, A.M., Professor of Mathematics and Astronomy.
Zephaniah Hopper, A.M., Professor of Mathematics.
James A. Kirkpatrick, A.M., Professor of Writing and Bookkeeping.
Edward W. Vogdes, M.D., Professor of Moral, Mental, and Political Science.
Lewis Angelé, Professor of the German Language.
François A. Brégy, A.M., Professor of the French Language.
Joseph W. Wilson, A.M., Professor of Practical Mathematics.

Henry Hartshorne, M.D., Professor of Anatomy, Physiology, and Natural History.
Daniel W. Howard, A.M., Professor of History.
George Stuart, A.M., Professor of the Latin Language.
Isaac Norris, M.D., Professor of Natural Philosophy and Chemistry.

Ten of those who were thus inducted into office were former members of the Faculty, who had proved their fitness by their past services; three were new to work in the school, and at their head was the first graduate of the school who had been called upon to direct its administration,—George Inman Riché.

The new principal was well known in the public life of Philadelphia, and brought to his difficult post a knowledge of men and affairs that proved most helpful. He had been graduated from the High School in 1851, and thenceforward was foremost in zeal among an Alumni whose characteristic is intense devotion to the Alma Mater. He had studied law, and had been admitted to practice in the courts of Philadelphia; but an early ambition led him away from his profession into educational work. No administrator could have been better equipped for so complex a burden as that which the principalship of the High School imposed. For two years he had served on the Board of School Controllers, and by his vigor, earnestness, and culture he had impressed his colleagues most favorably. An interest in public life led him into the turmoil of political campaigning, in which he so bore himself as to maintain his ideals unsullied and yet win the respect of those with whom he worked. A term in Common Council had rounded his political career. And now, in the strength of his young manhood, for he was but in his thirty-fourth year, he returned to his old

GEORGE INMAN RICHÉ
President, 1866–1886

school, in which he served for almost twenty years with undiminished vigor and enthusiasm.

During this long administration thousands of students felt the impress of his strong individuality. "Possessed of rare gifts as a speaker and having a crisp, incisive style, his addresses in the school and on Commencement days and in educational assemblies were always listened to with rapt attention. . . . By instinct and breeding a gentleman, Professor Riché's influence upon the students was most happy. Many a thoughtless lad has been saved from the consequences of his mad pranks by Professor Riché's considerate kindness; while, of all that eager, noisy crowd that thronged the hallways and blackened the school-yard, there were some whose lives were changed by his word fitly spoken, many who loved him with all the ardor of boyish hero-worship, and not one who did not fully respect him." *

As an executive President Riché displayed great ability, and under his energetic and tactful leadership harmony and helpful co-operation developed among his colleagues, as in the older days of the school. His relations with the school authorities aided materially in giving a settled policy to the school. The act of 1867 changed the method of electing Controllers, who were hereafter chosen by the county courts. As a result, there were fewer changes in the membership and less variability in policy. The chairman of the High School Committee during four-fifths of this administration was Mr. James

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* "The Central High School of Philadelphia: An Historical Sketch," by George Howard Cliff, who was a pupil and a member of the Faculty under President Riché.

Freeborn, whose confidence in the talented principal of the High School insured sympathy with his plans.

The new principal was inaugurated on September 3, 1866, when Edward Shippen, President of the Board of School Controllers, introduced Mr. Riché, and an appropriate address was delivered by Hon. William S. Pierce. As most of the Faculty had been re-elected, there was no break-down in the school machinery. The two new faces were those of George Stuart, who now returned to the High School to complete his life-work, and Dr. Isaac Norris, a graduate of the University of Pennsylvania, who, after distinguished service in the army hospitals, had turned his attention to purely scientific fields. A few days after the term opened the Faculty was completed by the election of John Kern to the Professorship in Drawing. Professor Kern's term is almost parallel with that of President Riché. He was a retired sea-captain, with an exhaustless stock of sailors' yarns and tales of travel. A long service in the teaching corps of Franklin Institute had qualified him to give instruction in perspective and in free-hand, but it is probable that his stories, which with his honest manner made him a great favorite with the students, were remembered far more vividly than his more formal lectures.

There was yet one vacancy in the Faculty caused by the abolishment of the assistancy in Latin, and President Riché, whose knowledge of the conditions of life led him to strengthen the practical courses, urged that in its place there should be created a Professorship in Commercial Calculations, Business Forms, and Penmanship. To this chair David W. Bartine, an alumnus of the Millersville State Normal School, was called. After several years

he was transferred to the Professorship of Algebra, in which his fidelity, teaching power, and the sterling worth of his character have won for him the respect and friendship of the thousands who have studied under his direction.

The resignation of Professor Brégy in 1867 left a vacancy, which was filled by strengthening the scientific courses. French was dropped from the curriculum and a chair in Physical Geography and Civil Engineering was instituted, to which Edwin J. Houston was called. The election of Professor Houston forms an epoch in the scientific history of the school. He had been graduated from the High School with the Forty-third Class, and had been engaged in study and in teaching during the three years that had intervened before his election to the professorship. He brought to his new work an enthusiasm that imparted life to his instruction, a love for boy-nature that made him a potent influence among his pupils, and a genuine scientific power that presently won for him and for the school a national reputation. In a few years his field was limited to Physical Geography and Natural Philosophy, which he taught until his resignation in 1894, and of which he is still Emeritus Professor.

With the opening of the school year in September, 1867, Dr. Hartshorne accepted a call to Haverford College, and in his place was elected Dr. Jacob F. Holt, whose study at Harvard and at the University of Pennsylvania, together with seven years' experience as a teacher at the Polytechnic College, well attested his fitness for his new work. He soon became a general favorite with the students, especially after he had illustrated in his opening lecture that an experience acquired

in tracing the direction of bullets which had entered the body would also aid in enabling one to determine the quarter from which a piece of chalk had come! Thirty-five years of teaching have not detracted from his ability or popularity, and his room to-day is hallowed with as wholesome traditions as any in the school. But three men have taught anatomy in the High School,—McMurtrie, Hartshorne, and Holt,—and each has proved worthy of the others.

In 1868, Professor Kirkpatrick determined to leave the school with which he had been connected as pupil and teacher since its doors were first opened, thirty years before. To fill his chair George Corliss, A.M., one of his former pupils, was elected, and served as Professor of Bookkeeping for seven years.

The development of the scientific courses under Dr. Norris and Professor Houston, and the hearty interest of the pupils in this phase of the curriculum, led to the introduction of laboratory methods of investigation. Since the days of Professor Booth there had always been a chemical laboratory at the Central High School, but in order to obtain the best results it was felt that the elements should be placed in the student's hands, so that he might himself study the product. To this end an assistancy in Chemistry was created, at first to aid in the illustration of the chemical lectures. For several months in 1868 this position was filled by Dr. John Stockton Hough, afterwards eminent for his contributions to medical literature. He was succeeded by Dr. John S. Newton, a graduate of Jefferson Medical College, who taught acceptably for two years. But the appointment that has rendered this position illustrious was made in

JOHN KERN

EDWIN J. HOUSTON

DAVID W. BARTINE

JACOB F. HOLT

GEORGE W. SCHOCK

GEORGE CORLISS

September, 1870, when Elihu Thomson, who had been graduated from the school but six months before, returned to his Alma Mater to spend ten years in her service. As an instructor, Mr. Thomson was efficient, capable, and popular. His boyish bearing (for he was but seventeen years of age) and his modest manners gave an impression of reserve power, and that always wins respect from the American youth. Little does the average teacher know of his influence upon his pupils and of the varied sides of character he may impress. One Alumnus records that under the influence of Mr. Thomson he fitted up a private laboratory at his home for the study of the mysteries of chemistry. Another still treasures a telephone which he and some of his class constructed before they saw the commercial form of 'phone, that had just then been invented. Added to this work as a teacher, Mr. Thomson advanced the reputation of the school by the series of electrical inventions which he, in collaboration with Professor Houston, perfected, and which have linked their names together in a world-wide reputation.

In 1873, Mr. Monroe B. Snyder was elected to the teaching force, and since that time has devoted himself to the astronomical work of the institution.

Upon the death of Professor Angelé, in 1874, Max Straube, a former student at Erfurt and Heidelberg, and a native of Prussia, was elected to the Professorship of the German Language. Cultured in his bearing, scholarly in his tastes, Professor Straube has succeeded in maintaining the best traditions of a department that owed its first establishment to the Germanic aptitudes of John S. Hart. Within recent years the modern languages have

secured better recognition in the curriculum, and this gives promise of even greater efficiency in the future.

Early in 1875, Professor Corliss resigned and the chair of Bookkeeping was abolished, a new department of Higher Arithmetic, Commercial Calculations, and Mensuration being created in its place. To take charge of this work, Professor George W. Schock, who had served with great success in the grammar schools of the city, was elected, and has since continued in the Faculty. In 1877, Professor Schock was transferred to the chair of Higher Mathematics and Astronomy, and a few years afterwards his work was limited to the former of these fields. During his long service of more than a half-century in the public schools of Philadelphia and Montgomery County Professor Schock has made a lasting impression of capability and of honesty of purpose, and by his power of effective presentation he has to a marked degree succeeded in his work as a teacher.

When Dr. Norris resigned in 1876, Elihu Thomson was promoted to the professorship, and was succeeded in the assistancy by Dr. Henry Leffmann, a former student of the school, whose excellent work in chemistry has since won for him an honorary degree from his Alma Mater.

In 1877 two of the senior members of the Faculty, Professors Rhoads and McClune, retired from active teaching, and this necessitated a reconstruction. Professor Schock was transferred to the chair of Higher Mathematics and Astronomy, and Samuel Mecutchen, a graduate of the First Class and an experienced teacher in the elementary schools, was elected to the Professorship in Higher Arithmetic. While Professor Mecutchen's

service covered but four years, it is remembered with great appreciation by those who studied under his direction.

Professor Rhoads's successor was the ill-fated William Newton Meeks, a young man of brilliant powers, whose tragic death while in his first year of work was so deeply mourned by those who knew the promise of his career. He was a graduate of the High School, and by the advice of President Riché had spent eleven years in varied pursuits to strengthen him as a writer and teacher. His election was the result of a strong recommendation from the principal, and the work which he did from January to November, in 1878, fully justified the expectations of his friends. But on November 19, while riding in Fairmount Park, he was thrown from his horse and almost instantly killed. His loss was heartily and sincerely lamented.

In many ways this period of three or four years must have been mournful to those who had watched over the life of the school from its infancy. Hart and Brégy had passed away in 1877; two of the veterans of the Faculty had retired; fifteen months after Meeks's sad accident Professor Wilson died in the harness, working until within a few weeks of his death. The only member of the Hart Faculty who survived, Professor Hopper, was destined to serve in the High School under all of its administrations, and to win the regard of at least three successive generations of students.

The vacant Professorship of Belles-Lettres and Elocution was filled by the election of Franklin Taylor, a man of wide experiences and genuine scholarship. He was the cousin of Bayard Taylor and had been his companion

in travel. Years of study at Harvard and the German universities, a varied and successful work as teacher and superintendent of schools, together with a profound knowledge of men and affairs, united to make Professor Taylor a cultured and scholarly instructor. He was better known in the educational life of Pennsylvania than any member of the Faculty since the time of John S. Hart. His work at the High School, especially after he was transferred to the chair of English Literature, was keenly appreciated, particularly by those whose tastes directed them to literary pursuits.

The death of Professor Wilson led to another of the many transfers that characterized this later period. Professor Taylor took charge of the work in Literature. Dr. E. W. Vogdes became his successor in Belles-Lettres and Elocution, and Frederick F. Christine, A.M., was elected to the vacant Professorship in Mental and Political Science. A successful experience of more than a quarter-century as a teacher and principal in the elementary schools, together with the efficient leadership which he had displayed in various educational movements, commended Professor Christine to the Committee, and has since won for him special honors from the Board of Public Education. In 1894 he was transferred to the chair of Logic and Rhetoric.

When Elihu Thomson resigned from the Faculty to assume the direction of the work of the General Electric Company, Dr. William H. Greene, a graduate of the High School and of the Jefferson Medical College, was elected his successor. As Dr. Leffmann also resigned at this time, there ensued an entire change in the department of Chemistry, and Oscar C. S. Carter succeeded to

SAMUEL MECUTCHEN

MAX STRAUBE

FREDERICK F. CHRISTINE

ELIHU THOMSON

WILLIAM H. GREENE

MONROE B. SNYDER

the assistancy. The twelve years of Dr. Greene's connection with the Faculty of the High School will be recalled with appreciation and gratitude by thousands of students. His warm heart and genuine interest in his work, together with a certain alertness of wit, made him a great favorite with all. When he resigned to enter business life, there was a general regret from those who through constant association had learned to esteem his many good qualities.

An excellent business opportunity led to Professor Mecutchen's resignation, and Andrew J. Morrison succeeded in the chair of Higher Arithmetic. A wholesome, hearty disposition, coupled with great good sense, made Professor Morrison a model guide for boys of the High School age. He taught in the school for but two years, and in his successive promotions, to the Assistant Superintendency of Schools and in 1898 to the principalship of the Northeast Manual Training School, none have rejoiced more than those who at the High School had learned to know the strength of the man and his power as a teacher.

When Professor Morrison resigned, George Howard Cliff, a first-honor graduate of the High School and a grammar principal tested by five years' experience, was elected Professor of Higher Arithmetic. He held this chair for five years, and was then transferred to the department of Belles-Lettres and Elocution. Professor Cliff was one of the most successful teachers of the High School Faculty. In his instruction in composition he laid great stress upon carefulness, and by his own persistent industry he led the boys to see the viciousness of the slovenly writing which to so many seemed natural.

In the larger life of the school he played an important part. Unlike many teachers, he did not sacrifice his interest in the affairs of the world in submission to the narrowing influence of his work. When the boys needed counsel upon matters connected with their journals or their entertainments or their public exercises, they turned naturally to that member of the Faculty who, from experience and inclination, was best able to give them the help that they needed. His election as the first principal of the Philadelphia Normal School was a deserved recognition of administrative talent of an unusual order, and his success in that school increased the great regret with which his withdrawal from the teaching profession was greeted.

To complete the list of the Faculty during the Riché administration mention should be made of Dr. William H. Wahl, Secretary of Franklin Institute, who substituted most successfully for Professor Houston in 1872-73, during the latter's study in Germany.

This brief account of the additions to the Faculty from 1866 to 1886 will confirm the general judgment that the work of the school during this period was good and thorough. There was a general fidelity to duty that sprung from a sincere desire to realize a lofty ideal. These men did their best to serve the school. But from some there was criticism, suggested by the fact that many of the members of the Faculty had received no other preparation than that given at the High School. In some cases, as in the scientific department, this was more than compensated for by native genius. But, it was urged, "breeding-in," if long continued, is apt to result in a conservatism that becomes fixed and static. There might

be good teaching, but there would be less regard for scholarship. The answer to this criticism must be based upon the success of the institution during this period as evidence that President Riché's policy had good results in the general influence which the school exerted upon the characters of its pupils.

It is difficult properly to estimate the necessary qualities of the successful teacher. To secure young men of university training, but without experience, results in poor teaching; the selection of experienced pedagogues, who have not specialized in any distinct field, may result in wooden and lifeless instruction. To maintain a proper balance between experience and scholarship is a hard and delicate problem, and the only conclusion that an examination of the history of the High School suggests is that occasionally the balance has inclined too far in either the one or the other direction.

The course of study was but occasionally altered during this period. President Riché had a profound appreciation of the function of the school in developing men of affairs, fitted to cope with the practical problems of life. From this point of view, therefore, emphasis was laid upon scientific and practical studies, while the languages were neglected. The course in Latin, which in 1854 included Horace, Cicero, and Virgil, was now so curtailed as to leave at one time but little more than the grammar and first book of Cæsar; under Professor Roese, the students in German read Schiller, but in 1886 they were able to cover but one hundred pages of grammar. There were five professors in mathematics and but two in the languages. While this bias will not find acceptation to-day, it was based upon careful thought and

logical reasoning. Less than one-fifth of the students entered upon professional studies; for the vast majority, therefore, the High School was a finishing school and concluded their formal education. Their interests demanded a course that should be, first, disciplinary in training the mind, and, second, broad enough to give those who followed it an insight into the various phases of intellectual activity. That the High School did this, in spite of the apparent evils that come from diffusing the attention through many studies at one time, is best attested by the success of the graduates of this period.

This consideration will lead to a clearer understanding of the detailed changes. French was dropped and German preserved, because of its larger commercial value. Physical geography was introduced, because of the necessity of an adequate knowledge of the environment of man. Commercial calculations and business forms were introduced, while the more formal bookkeeping was afterwards omitted. Penmanship and arithmetic were retained, despite President Riché's oft-repeated protest that they were elementary branches and should be mastered prior to entrance to the High School. Not until later was the second of these subjects remitted to the grammar schools. There were no electives, and while this prevented special training along the lines of individual preference, it brought each pupil in turn under every member of the Faculty, and so the cohesion of the school was maintained.

Unquestionably the most important change in the curriculum was the introduction of English literature in 1878. Professor Albert H. Smyth, the present head of the department, and himself a student of the school

during the Riché period, has given an admirable summary of the work of his predecessors:

"Before President Riché's time, there had been much teaching of rhetoric and belles-lettres, as it was then called. Professor Rhoads, of the thundering voice and formidable manner, succeeded in creating in his students a wholesome fear of certain solecisms and mispronunciations, and his successor, the ill-starred Professor Meeks, held before his classes a high standard of purity in English style and taught a simple and natural way of reading. Nor had there been at any time in the history of the High School a complete absence of the literary spirit. In the early days, John Sanderson, one of the ablest writers in American literature, favorably known among the men of letters of France and England, made frequent cross-references in the class, roaming from Horace and Virgil to Pope and Byron. At a later time, Professor McClune, himself a writer of verse, enlivened the mathematical hour with talks about English literature and quotations from English poetry. President Riché, however, was too ardent a lover of the humanities not to desire a systematic and continuous study of literature, and it was chiefly through his exertions that the chair of English Literature was established. Professor Wilson was transferred to the new chair. He had been a most successful teacher of geometry; he was a man of considerable reading and literary sympathy. He was still new to the teaching of literature when I entered the school as a student, June, 1878. The chief impression that he made upon me was of conscientious industry. He toiled ceaselessly to fit himself for a task which had been put upon him late in life. Indeed, I am sure that he hastened his death by the severity of his application. He made use of the Mercantile Library, and as that was my daily haunt after school hours, I saw much of him and learned his ways of work and the direction of his reading. He read little criticism, but went directly to the poets, essayists, and historians, and read extensively, albeit with small regard to editions. During the entire time that he was Professor of English Literature he read three books a day,—that was his stint,—in addition to the research made at the Library in preparing upon a play of Shakespeare, or some 'metaphysical' verses of Cowley, or certain 'orphic' utterances of Emerson or Alcott. Wilson was a grave, calm, reserved man. He rarely smiled, but was uniformly kind and courteous. Sometimes he was betrayed into a display of feeling, as when I saw the tears start while he read

Bryant's poem 'The Future Life.' His discipline was excellent, but his Socratic method of teaching savored of the mathematical classroom, and his tenacity about trifles pertaining to the text, I cannot help thinking, kept him and his pupils from the great vital significance of the works that he read.

"When Professor Wilson died he was succeeded by Dr. Franklin Taylor. The latter had not been happy in his chair of Belles-Lettres, and it was a fortunate thing for the school and for him that he was transferred to a more congenial department. Here his success was instantaneous and remarkable. Dr. Taylor was a man of great learning, undoubtedly the best-informed man in the Faculty. He had followed his own instincts in education; he had studied at Harvard, and then accompanied his cousin, Bayard Taylor, to Europe on that famous 'tramp trip' of 1844, and studied at Heidelberg under Schlosser and Gervinus and Lorenz Oken and the most liberal minds of Germany. He had travelled much and had seen many of the world's great men. He was a profound student and abreast of the latest movements of the mind. No better teacher of literature could have been obtained than Dr. Taylor, who, if he had but possessed the faculty of patient application, would have made a distinguished reputation. With far wider reading and better scholarship than Bayard Taylor, he was content to pursue his course without any desire for popular recognition, and he died without leaving behind him a single literary monument or memorial. Dr. Taylor had no patience with the 'average boy.' The 'average boy,' he was wont to say, was 'evolved to eat peanuts and smoke cigarettes,' and that he was 'no more use than a Cincinnati hog.' When a class was mischievous or unresponsive, Taylor was silent. He could not force himself to teach. But when an intelligent interest was shown, he was often eloquent and inspiring. He taught his pupils to love England and to love English books. He filled them with the desire to travel. He instilled into them the sentiment of reverence. With all his faults,—his reluctance to make an effort, his lack of system, his neglect of the 'average boy,'—Dr. Taylor was one of the most inspiring teachers I ever knew, and by some few of his pupils, at least, is remembered as one of the most potent influences in the shaping of their lives." *

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* To this account the work of John S. Hart could be added. His course on "The History of English Literature" was the first formal teaching of that subject in the school.

There was a great extension of the work in physics and chemistry during this period. The two subjects, formally arranged as branches of one general field, were divided, and this led to a more advanced grade of instruction in both. In 1875, largely through the efforts of Mr. Thomson, nine laboratory tables were placed in a basement room, and henceforth the students were enabled to perform such experiments in elementary analysis as required merely test-tubes and the ordinary reagents. Six years later, Dr. Greene was enabled to increase this number to eighteen, but it was not until 1887 that the laboratory was completed, so as to enable him to give instruction to an entire section. It is believed that this chemical laboratory is the oldest, both in its inception and in its completion, among the high schools of America.

In the department of Physics, the chief development was in the line of systematic teaching and competent illustration. Professor Houston was a natural-born teacher, who loved his work, and hence attained to unusual power as a scientific lecturer. Through his efforts costly illustrative apparatus was purchased and added to the departmental equipment. "Though the experiment is a failure, the principle remains the same," was a well-remembered phrase of the day, but it applied to the exceptional cases, and did not form the rule.

Professor Elihu Thomson, whose success in the field of industrial electric applications has been so well recognized, has taken time in a busy life to write a few thoughts suggested by his experience in the school:

"I think that there were few schools, outside of the scientific and technical schools, in which science played so important a part in the curriculum; and I think, further, that with some changes in the

subjects and methods the course of study would stand well to-day. I would indeed be satisfied to give my own boys just such a course, modified by the later advances in knowledge. The equipment in the scientific departments was greatly increased during the time I was a student and later while teaching in the school.

"When I first took charge of the chemical laboratory in 1870 the laboratory itself was largely only a storehouse for bottles and apparatus, and little opportunity for real laboratory teaching existed. This was changed later by the introduction of separate work-tables and other much-needed facilities, which made the work of teaching quite satisfactory. The general apparatus and equipment were steadily increased in all of the scientific departments, especially so in the subject of physics under Professor Houston.

"Concerning my own life in the school, I have only to say that it was the usual school-boy's existence of some hard work and plenty of fun. Naturally, I found pleasure in such subjects as ancient history, geometry, algebra, drawing, surveying, zoölogy, anatomy and physiology, mineralogy, astronomy, together with my pet subjects, chemistry and physics.

"As a teacher, I can truly say that I began by knowing but little of real teaching and learning rapidly. I liked the work, and a body of bright, interested boys was always a great stimulus. The success of a teacher depends upon his own tact, his forbearance with minor faults, his unswerving purpose, and above all else upon his own enthusiasm for his subject. The aim of education, in science at least, should not be to store the mind with facts and theories, but rather to inculcate principles and to teach the student how to think, and to show him the sources of such information as he may need. These are the conclusions to which my experience as a teacher gradually led me.

"It is difficult to single out from years of experience incidents which may stand alone. As Professor of Chemistry and Mechanics between 1876 and 1880, my relations with my colleagues were always most pleasant, and with the students also. I never had to complain of any very serious breaches of discipline, and that part of the work which consisted in repressing the boiling over of youthful spirits became easier as time went on. I was only twenty-seven when I left the school, and very much of a boy myself then, as I hope I am still in spite of nearly fifty years of life's experiences.

"There was little time to do much scientific work, though an occasional scientific paper was read or published. Personally I was

always at work on some problem or another,—chemical, physical, or mechanical,—either at the school or at home, where I maintained a laboratory workshop. There were laboratory appliances, such as furnaces, lamps, etc., made. There were lenses, prisms, glass specula also, some of these involving much careful work. There were novel forms of electrical machines, such as dynamos, motors, and static machines. There were organ pipes and reeds and other acoustic apparatus. There were numerous experiments in photography according to various processes. Many new experiments were devised for lecture illustrations and much original apparatus built for the same purpose. The list is a long one, and I will stop.

"In 1877-78, Professor Houston and I made a series of electrical tests on dynamos such as were then on the market, working with a committee of the Franklin Institute. The results were embodied in probably the most important paper on the subject published up to that time. It was widely copied and commented upon. It was the beginning of our more serious interest in industrial electric applications, though some years before we had done considerable experimenting in different forms of telephone and microphone."

The undergraduate life was generally healthy and wholesome during this twenty years and there was rarely any marked friction. The school occupied a prominent place in the public eye, and when distinguished strangers came to the city, they were naturally brought to the High School as one of the most interesting of the city's institutions. In 1867 a Committee of the Baltimore School Commission examined the school, and reported with much pleasure the cordial greeting that the students gave to one of their number, William S. Crowley, Esq., when it was announced that he was an Alumnus of the Philadelphia High School.

In 1869 an interesting attempt was made to establish a cadet corps, a movement that has been several times revived. Under the direction of Dr. Bartine, a squad of students formed themselves into a company, practised the manual of drill each day at recess, and in August formed

a summer camp in the Lehigh Valley. Eventually, the organization enrolled itself as Company M of the First City Regiment.

The evening declamations, which had been suspended during the war, were revived by President Riché, not only because of his interest in oratorical practice, but also in order to give an opportunity for the parents of students to come to the school and meet with the members of the Faculty in a social way. The programmes of these entertainments are very interesting, and it is pleasing to notice the frequency with which one reads names now thoroughly familiar to the public.*

When a class was about to graduate the custom of formal leave-taking prevailed. In the last hour with each professor some appointed representative on behalf of his fellows would deliver a farewell address which, as a sign of good-feeling, was even more effective than the Valedictory address.

As early as 1873 there were class badges, with the invariable Latin motto, and sometimes designed by the artistic genius of the students. Eventually, these were elaborated into the class-pins that are now so generally admired.

In the various public happenings the boys were interested in a healthy, vigorous way. On October 27, 1876, the Faculty and school visited the Centennial Exposition in a body and were honored with a special address by General Eaton, United States Commissioner of Educa-

* Thus, the following names are found on one programme of a students' entertainment on December 15, 1869: Robert E. Pattison, Samuel E. Cavin, Dewey Bates, William Dayton Roberts, Abraham M. Beitler, and Craige N. Ligget.

tion. When General Grant returned from his world-voyage the High School boys, marshalled by Dr. Bartine, joined the great parade which was given in the hero's honor. It is officially recorded that the general was accorded a "cheering" reception. Four years later, on September 16, 1884, the school was adjourned to enable the students to visit the Electrical Exhibition of the Franklin Institute. As two of the members of the Faculty (Professors Houston and Snyder) had been appointed on the Electrical Commission by the President of the United States, there was a twofold reason for interest in this work.

These public appearances of the students were a great aid to the school as well as a great pleasure to themselves. Cohesion and *esprit de corps,* which add so much to the tone and loyalty of a school, may be developed by such means. Especially are they needed in these later days, when the student body has become so large that there is serious danger of the loss of the old-time spirit of unity.

Numerous literary societies and organizations flourished and waned. As long as the originators were in the school, a lively interest would be taken, but after their graduation would come stagnation and death. There has been no permanent society in the history of the school.

Perhaps the most interesting of the students' scientific societies was The Scientific Microcosm, organized in 1870, which continued its meetings for more than seven years and inspired many of our prominent Philadelphia scientists with ideas which they have since worked to completion. Its organizers were Elihu Thomson and William H. Greene, who were respectively members of

the Fifty-fifth and Fifty-sixth Classes. The former was graduated in February, 1870, and a short time prior to the Commencement, taking his friend Greene into confidence, he discussed with a group of classmates the advisability of forming a scientific society. The meetings were held in Dr. Norris's room (No. 2), and several of the members of the Faculty became interested in the project. Professors Houston, Howard, Norris, Leffmann, and Dr. Worthington, of the Franklin Institute, attended meetings. The names of the founders are as follows: William H. Greene, Elihu Thomson, Dewey Bates, Henry Willis, Robert E. Pattison, C. W. MacFarlane, W. H. Schlemm, and John Bartlett. The meetings were held monthly and at night, permission having been secured from the Faculty. One or two papers were read at each meeting and a subject was assigned for discussion. A reviewer was appointed to sum up the results of each discussion, his report to be read at the next meeting of the society.

The members of The Scientific Microcosm were allowed to use the apparatus of the school for their experiments, and this was probably the chief incentive to their scientific work. Dr. Houston, Dr. Norris, and Professor Holt were particularly generous in their advocacy of the use of the equipment by the students. Some of the early papers read before this society deserve more than passing mention. John Bartlett prepared a careful paper on "Phosphorescence and Fluorescence," which is said to have been the first read upon this topic in America. It was profusely illustrated with experiments exhibiting various colored phosphori so arranged as to present an illuminated landscape.

On May 8, 1870, occurred a violent hail-storm, and as it was the first striking natural phenomenon since the organization of the Microcosm, an investigation was undertaken by Elihu Thomson, and in his report he demonstrated from observation the truth of the circular theory of hail-storms. His paper was published in pamphlet form, and as the students lacked means to have it prepared in fitting style, it is recorded that Greene and Bates set the type and did the printing. The pamphlet was illustrated with wood-cuts made by Dewey Bates, who later was to win international reputation as an artist.

Towards the close of 1870, Andrew J. Parker, at that time assistant to Professor Leidy at the University of Pennsylvania, joined the society. He was an ardent, earnest student of great ability, with a universality of interests and tastes. He prepared several papers,—one treating of the polarization of light, and another on the action of colloids on the formation of crystals. This second paper antedated by more than six months the famous discussion of the same subject by Dr. Henry Morton, of Stevens Institute, and as it contained some very brilliant ideas on the action of the sap of plants in modifying the character of the foliage, it is unfortunate for the credit of the High School that the Microcosm was not able to publish Parker's results. Mr. Bartlett sends the following reminiscence of one of the meetings of the society:

"I remember one evening we were engaged in the discussion of molecular physics. Parker and Thomson were at that time deep in the mysteries of the subject, which involved the consideration of the interaction of three or more bodies, and the aid of mathematics was called in. Just then Professor Barker (George F.), who was on a visit to Philadelphia from Boston, stepped into the room with a

pleasant expression on his face, intending, no doubt, to encourage youthful scientists and probably expecting to be amused with some discussion found in Pepper's *Playbook of Science* (a popular work of the day), but when he had heard the views of these two boys, for neither was over nineteen years, involving such an acquaintance with so abstruse a subject, he could not refrain from giving expression to his astonishment and admiration, and made a very pleasant address of encouragement."

The society continued to prosper and to increase in membership. Several were elected from without the Alumni of the Central High School and more from later classes. Presently an element entered who were more pleased to discuss parliamentary subjects than science, and personal disputes about the constitution and by-laws occupied the major part of the evening. The result was that those interested in science no longer attended and general interest lapsed. After a time the society ceased to meet at the school, and from 1875 to 1878 the original members continued their sessions at the private laboratory of Dr. William H. Greene, Sansom Street below Tenth.

Such was the record of a society which did more to encourage independent scientific inquiry than any other that has been formed in connection with the Central High School. It must be remembered that the Microcosm flourished before laboratory teaching had been introduced into the school. The chemical laboratory was started about 1875 by one of the founders of the Microcosm, Elihu Thomson, then a member of the High School Faculty. As the facilities for laboratory instruction increased there was less necessity for this independent outside work. A large proportion of the members of the Microcosm became leaders in the literary, scientific, and

political life of Philadelphia. Rarely has there been a group of students who have so early displayed tastes that were finally to determine their careers. As a boy of nineteen, Elihu Thomson showed interest in scientific work, William H. Greene, an intimate knowledge of chemistry, Dewey Bates, an ability at graphic representation, Andrew J. Parker, the power of original investigation, and so with many other names upon the list. The student of educational history must regret that as the instruction in the school becomes more systematic and more thorough the opportunity for such independent inquiry will decrease.*

The opening exercises have always formed one of the

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* The charter of The Scientific Microcosm is in the possession of Elihu Thomson, who has copied this list of its members:

William H. Greene, Elihu Thomson, George J. Garde, Dewey Bates, Abraham M. Beitler, Edwin J. Houston, Frank P. Prichard, James H. Warrington, Harry Willis, J. Alexander Wilson, James Alcorn, John Bartlett, Lucien E. R. Lyons, W. M. Spackman, Robert H. Walch, Benjamin F. Teller, A. H. Williams, H. G. Harris, Robert E. Pattison, George W. Cloak, Harvey Middleton, George R. Buckman, C. A. Deemes, D. C. Greenewald, G. Boswell, Jacob Teller, C. R. Pancoast, Henry Leffmann, William H. Schlemm, C. W. Macfarlane, William H. Wahl, Andrew J. Parker, Isaac Norris, William P. Evans, J. Harry Buckingham. With but few exceptions they were students at the High School.

As an illustration of the nature of the meetings, the following programme for December 22, 1869, is given:

1. "Combustion," by William H. Greene.
2. "The Fourth Day of Creation," by H. Willis.
3. "Ozone," with experiments, by E. Thomson.
4. "Color," illustrated, by D. Bates.
5. "Acoustic Tunnels," by R. E. Pattison.

Questions for discussion: Chemical Solutions, and Whence the Solar Heat?

most interesting incidents in the school life, since they afford occasion for the assembly of all of the students, together with the members of the Faculty.

When Professor Bache left the school six divisions had been provided for in the roster. These were accustomed to assemble at nine o'clock in the morning, and after the reading of the Scriptures for fifteen minutes the scholars would disperse for the other duties of the day. They were accustomed to interchange class-rooms at the conclusion of each hour. With the development of the school, Professor Hart found it possible to attempt a more elaborate plan whereby declamation exercises on the part of the students could be introduced. These occurred at the end of each school day at 2 P.M., and formed a pleasant conclusion of the day's work. President Riché transposed the order of the morning exercises and introduced regulations providing for the assembly of the students in the lecture-room at 9 A.M., the professors being seated along the aisles at convenient distances. The President then read a chapter from the Bible, and four upper classmen, representing the divisions, D, C, B, and A, in turn recited a personally chosen selection, after which the classes were sent by roll-call to their respective class-rooms. This practice in public speaking was of inestimable value to the students of the school. To stand up in a crowded hall before from four hundred to six hundred interested and not always kindly critics is a severe ordeal, and the result was that those students who had any tendency towards public speaking gradually acquired a confidence which served them well in after-life. Harry Shelmire Hopper, of the Sixty-sixth Class, says:

THE ASSEMBLY HALL, 1854–1900

"We always enjoyed the comic selections, and a mild sensation occurred when a boy's nerve and memory deserted him after beginning his speech and he would be obliged to leave the platform. The system of marking declamations was most peculiar. Each professor gave the speaker a mark; these were added together and divided by the number of professors, and the result was the average. One or two professors did not consider themselves equal to marking for this subject and so never marked. One often gave marks lower than the others, because he considered the selection too theatrical or not properly selected. We were bold enough to go to a professor who gave us a low declamation mark and tell him that his was the lowest, and ask him to raise it, which appeal was sometimes successful."

It is a tradition that Ignatius Donnelly was the first student of the school to give an original oration before his class, but the students of the later fifties will remember the sensation that was made when George Alfred Townsend, in D, attempted to follow Donnelly's example before the entire school. C. Cathcart Taylor, whose "Random Thoughts on the High School and its Boys" has preserved so many of the interesting traditions of the school, says that the year after public declamation was introduced "a lad who had been only two years in Pennsylvania was admitted to the High School,—shy, unacquainted, and plain to look at. Seldom if ever had original compositions been delivered in the lecture-room when this new boy was called to his maiden effort. He spoke, on a theme of the day, his own thoughts and words to the surprise of many; and some may have called it assurance. There are always too many to cry 'Sit down' and 'Come back,' but the second time this boy spoke he addressed his class. The third time he read a poem. The example spread and other boys began to read their speeches. It was soon known

what crack speaker was to be up to-day and which would to-morrow. Joel Cook, . . . also a pupil at the time of which I speak, delivered a piece critical of all the crack speakers, including the new boy; but the latter was not to be discouraged, and upon the next occasion, to use an expressive verse of Bret Harte's, he 'went for that' Cook without gloves, so that the Faculty had to compel all original speeches to be submitted to examination." The new boy was George Alfred Townsend, whose subsequent relations to the American press "form the commencement of independent journalism in America."

There was an interesting later development in the declamation exercises when Richardson L. Wright, Jr., of the Forty-fifth Class, delivered an oration in French which was so polished in style and showed such mastery of the literary construction of the language that Professor Brégy pleaded with his colleagues for permission to have Wright's oration spoken upon the Commencement platform; but the members of the Faculty were afraid that the effect of a foreign language upon an audience of which the undergraduates formed an important contingent might not be conducive to the good order of the Commencement exercises.

A testimony to the Riché Faculty from one of the Alumni, who has since attained to eminence in public life, will be an appropriate conclusion to this subject.

Roland P. Falkner, the first honor of the Eightieth Class, was the first High School graduate to take a city scholarship in the College Department of the University of Pennsylvania. He was afterwards elected to a professorship in the Wharton School, and has rendered useful public service as statistician of the Committee of the

HENRY LEFFMANN

ALBERT H. SMYTH

HENRY WILLIS

ANDREW J. MORRISON

GEORGE HOWARD CLIFF

WILLIAM L. SAYRE

United States Senate to investigate prices, as Secretary of the American Delegation to the International Monetary Conference, and now as the Chief of the Bureau of Documents, Congressional Library. He writes from Washington, in recollection of his High School days:

"Three of the instructors will never be forgotten, for to them I owe impulses and ambitions which have affected my subsequent career.

"First of all I would name Franklin Taylor. Through his relationship to Bayard Taylor, and the fact that he was the cousin so frequently mentioned by Bayard Taylor as his companion in 'Views Afoot,' the Doctor became from the first in my eyes a personage of importance. He was an irascible gentleman, and in his anger would say sharp things, which amused quite as much as they terrified the boys. But he was full of old-fashioned scholarship. He dwelt upon the value of classical learning with so much insistence that I regretted the meagre quantity of Latin doled out to us. In two years and a half we had finished about half of Nepos. But one day Taylor was speaking of Cæsar. He told us he was a great writer, and, slamming his book upon the desk, said, 'Read him, read him, and read him in the original.' I had never thought of anything so ambitious, but, fired by Dr. Taylor's enthusiasm, I went to my father's library, where I found a well-worn Anthon's 'Cæsar.' With the generous aid of Anthon I plodded through the first three books of Cæsar on my own account. I doubt if any other person could thus have held me to such a self-appointed task. It was Taylor who fired me with a wish for something more than a High School education and sent me to college and eventually to Germany. At this distance of time one remembers the fact rather than the process, but when in accordance with the custom in Germany I wrote out my life and placed there the names of distinguished teachers who had helped me in my intellectual development, I was proud to place first the name of Franklin Taylor. It may have been when I was at the High School, or a year later, that Dr. Taylor asked me to spend an evening at his home. He was all gentleness and sincerity, and took such a keen interest in my work and plans that the kindly remembrance of his good-heartedness remains an enduring memory.

"Second, I can never forget E. J. Houston. In the class-room he was clear as a bell, and the boy must have been stupid indeed who

did not profit by his instructions. But most of all I value him for his moral influence. Without affectation of holiness or piety, he knew how to reach the impressionable spot in a boy's character. I had several conflicts with him in regard to questions of disorder. His reproof was mild, but it sank deeper than a longer homily. Nor have I forgotten his admonitions, though I strove to show that I was indifferent to them. If my experience is a type of that of others, I can well understand the universal love and affection in which he was held. He never catered to popularity, but won it through sterling integrity and good sense.

"If I should place a third teacher in the list, it would be Jacob F. Holt. With him I never had any personal relations, but I felt him to be the best teacher we had. There was a solemn substance to his teaching which left an ineffaceable impression."

In the educational life of Philadelphia President Riché played an influential part. He was the first President of the Teachers' Institute, and by his example as well as his counsel he kept his Faculty in touch with the activities of the day. In 1869 the Artisans' Night School was established as the capstone of that system of public evening classes which the city has learned to esteem so highly, and its first principal was the accomplished head of the Central High School. The three principals of the school (Riché, Hopper, and Christine) and a large proportion of the Faculty have been drawn from the teaching force of the High School.

The movement towards manual training, as first presented, was an educational novelty with which President Riché seems to have lacked sympathy. In its first consideration there was a strong desire to engraft manual training upon the High School curriculum, and it is probable that this would have been done if the Faculty of the school could have been induced to welcome it. In 1874 the High School Committee inquired what instruction could be given in the mechanic arts without disturbing

WILLIAM A. MASON

OSCAR C. S. CARTER

the present course of study, but President Riché's answer, unanimously endorsed by the Faculty, was to the effect that technical education could only be given profitably *after* a liberal course, such as the High School afforded. Three years later the Committee again took up the matter and asked what instruction could be given in the industrial arts, and specified phonography and telegraphy as subjects which they would be glad to have considered. But again the Faculty, with a conservatism which it is now easy to deprecate, decided against the idea, and when manual training entered the school system of Philadelphia, through the efforts of President Steel and Superintendent MacAlister, it was established in a separate school.

In 1875 the University of Pennsylvania created a number of free scholarships for the pupils of the public schools in the Towne Scientific School. This may be hailed as the first step in that more liberal policy which has placed the University in the front rank of institutions of its class. These scholarships were open to the graduates of the grammar schools who had spent an extra year in the Senior Class; hence an additional duty was thrust upon the grammar principals, who were now obliged to prepare their students for both the High School and the University of Pennsylvania. The grammar principals therefore recommended to the Board that the February examination should be abolished, so that they might have but one test each year. Despite the protest of the High School Faculty, this proposition was carried, and consequently no classes entered the High School in February, 1877 and 1878, and as a result there were no mid-year Commencements in 1881 and 1882.

But after two years there was a return to the older practice until 1887, when the last February class was admitted.

The establishment of the school superintendency in 1883 brought many changes to the system. The entrance examinations were presently assumed by the central office and removed from the control of the High School Faculty. The establishment of the Manual Training School caused some anxiety, lest the influence and popularity of the older school should diminish.

It is probable that these new conditions aided in bringing President Riché to the determination to resign. He was weary of the burden that he had borne so manfully for almost twenty years. His work was done, and new problems were arising in which he was not interested. In the later years of his administration domestic sorrow had weighed heavily upon him, and in the Faculty the harmony that had characterized the earlier period had been sadly marred. Doubtless, also, there was a sting in the thought that the school around which his life had centred was being slighted for novelties and experiments. In 1884 the Faculty had inaugurated an agitation for a new building; a special appeal was sent to the Board calling attention to the fact that with sections containing seventy and eighty students the accommodations were wholly inadequate for the work. This suggestion led to no definite result, and Riché's regret found expression in his last report. "This is indeed a serious question," wrote he, "and may well challenge attention and claim precedence over other subjects that have occupied the time and thought of those in authority."

While all of these factors entered into his decision, it is

doubtful whether his disinclination to face new problems would have induced him to resign, but for the failure of the Board of Public Education to act in the appointment of a member of the Faculty as he thought best for the interests of the school. President Riché had been on the best of terms with his Committee. No appointments were made to the Faculty unless agreeable to him, and when a new policy was decided upon, he preferred not to continue as the head of the school under conditions so different from those which had obtained throughout his long connection with the institution.

In February, 1886, there was concluded the longest administration in the history of the school. President Riché's last official act was performed at the winter Commencement, where his reception must have convinced him of the genuine affection of the students and the respect and honor in which he was held by his colleagues of the Faculty.

CHAPTER XI

JOURNALISM IN THE SCHOOL

No other vocational tendency is likely to be asserted so early in life as that which leads one to news-writing. The keen interest in the daily life of the school, the instant appreciation which an apt criticism or a satire or a vivid description wins from the boy audience, the attention to effective writing which forms a part of the course of study,—all combine to turn towards journalism those who have the slightest bent in that direction.

Few public schools have sent forth a greater number of news-writers and journalists than has the Central High School. Situated in a large city where the press has been strong in vigor and independence of tone, its graduates have naturally turned to this vocation as one in which they might fairly expect to excel. The introduction of phonography during the administration of Professor Hart gave a special preparation for this line of work, and many an active journalist owes his first position to his peculiar skill in this art. The records of the High School show that among the members of the Alumni are included George Alfred Townsend, who was one of the first of the Civil War correspondents; Joel Cook, financial editor of the *Public Ledger* since 1883, and for many years prior to that time a foreign correspondent of the *London Times;* Hon. James Rankin Young, member of the United States House of Representatives and well known as a political

writer over the *nom de plume* "S. M."; Stephen N. Winslow, the oldest journalist of Philadelphia, editor of *The Commercial List and Price Current;* Charles E. School, of the *Evening Star;* George Harding, who became a part owner of *The Inquirer,* where many of the young graduates of his old school were welcomed as workers; Henry C. Titus, of *The Legal Intelligencer;* Rev. Robert M. Patterson, of *The Presbyterian Journal;* C. Cathcart Taylor, Esq., whose "Random Thoughts on the High School and its Boys" is a most valuable sketch of the Alumni of the school; William M. Singerly, proprietor and editor of *The Record;* William Perrine, whose recent work has caused his native city to be rechristened the City of "Penn"; James W. King, for many years managing editor of *The Press;* T. Ellwood Zell, editor and publisher of "Zell's Encyclopædia, Dictionary, and Gazetteer," and of many other works of kindred nature; Henry George, the Single Tax advocate; Alfred H. Love, editor of *The Peacemaker;* Addison B. Burk, of the *Public Ledger;* Clarence M. Barton, editor of the *Olympia Tribune* (Washington); Charles S. Wayne, editor in Colorado; Dennis F. Dealy; George W. Allen; George J. Brennan; Walter McMichael; Louis N. Megargee; Alexander J. McCleary; Drayton S. Lewis; William H. Burk; John Trevor Custis, Jr.; Felix N. Gerson; James S. McCartney; Henry C. Lukens; James M. West; John R. Dunglison; Russell P. Jacoby, and many others. The reportorial staffs of the various local newspapers contain dozens of Alumni, who are known to their chiefs as men of honor and capacity, serving with fidelity in the profession of their choice.

That many of these successful journalists received

their first impulse towards what has since become their life-work while students in the High School is beyond question. With many the first writing was for the school papers. George Alfred Townsend sent his first poem to *The High School Journal.* For two years Joel Cook edited and published *The Times* (1857-59), and when he left the school the paper was transferred to another firm, in which Charles E. School was the junior partner. When William Perrine was a student in the school he worked for several amateur journals, one of which, in urging his claim for the Vice-Presidency of the National Amateur Press Association, speaks of him as having entered the Central High School at the youngest age of any recorded admission. Two of the editors of *The Pedagogue,* William H. Mearns and Samuel L. Chew, were afterwards elected to like positions upon the staff of *The Teacher,* the educational journal of Philadelphia. Albert Elmer Hancock, whose novel "Henry Bourland" is one of the recent literary successes, was a correspondent and editor of the school paper of his day.

It is believed that since *The Mirror* was established in 1886 but two of its editorial staffs have not been represented in professional journalistic work.* Doubtless

* Perhaps the best illustration of the influence of *The Mirror* is afforded by the class of 1893 (Ninety-eighth Class). Of the staff of the school paper, the following have since engaged in newspaper work: William H. Ukers, on a New York trades journal; Robert S. Winsmore, on *The New York Times;* William M. Matos, on *The Evening Telegraph,* Philadelphia; William H. Bradner, illustrative work on Philadelphia dailies; Arthur C. Bray, editor of *The Daily Mining Record,* Colorado Springs; William B. Bray, on *The Inquirer,* Philadelphia; Melville Ferguson, on *The Record,* Philadelphia. Also Ralph Stearley and Charles Winsmore, who were temporarily engaged in newspaper work.

many of those whose names have been given wrote for the school papers, but in their modesty made use of a *nom de plume,* and hence have effectively concealed their youthful screeds. The school papers must have special interest, therefore, from the fact that contributions to them show tendencies which have since led in the choice of vocations.

Probably the first paper to contain student notes upon the life of the High School was *The Teachers' and Pupils' Advocate,* published in 1846-47 in Boston, New York, Philadelphia, and Baltimore. Its editor solicited correspondence from the High School, and soon established regular representatives there. Valedictory and Commencement addresses were printed in full, and there is at least one prize essay, upon "The Pleasures of Thought," by John R. Whitney, who is termed "a pupil of the High School."

A few years later came the first attempts to establish papers edited and controlled by the students. Alfred H. Love, of the Twelfth Class, was the founder of a class paper. As early as 1849, James G. Barnwell, of the Sixteenth Class, and now Librarian of the Philadelphia Library Company, edited a school paper called *The Minute Book,* and he recalls that it was not without its contemporaries and rivals.

With the great popularity of the High School under the Hart régime, the attention of professional journalists was directed to the field that it offered for their enterprise. The best known of the earlier magazines was *The High School Journal,* founded in May, 1857, by George Nathaniel Townsend, who had left the school two years before, after completing a partial course. Its publication

had been heralded by a prospectus, which was circulated freely among the student body, inviting the pupils to contribute generally to its support. Public opinion was ripe for a school organ and the students readily responded. George Alfred Townsend wrote his first poem for this journal, and in its third number appeared his "Progress of Education," in which the higher culture was surveyed in a most telling manner. Among the earlier contributors were C. Harry Brock and Henry C. Lukens. The articles give a thorough picture of the school life. When "Fanny Fern," the distinguished author of "Ruth Hall" and other books, visited the High School, the impressions which the students received of the eminent writer are vividly set forth. We are told that a special declamation exercise was held in her honor, and that "Master Cook, of Division D, delivered Clay's famous speech on the Jackson Expunging Resolution in a manner that would not disgrace the original orator." Afterwards, in her description of Philadelphia, she speaks of its citizens as well deserving "that their bright-eyed sons should be educated in a noble institution like the Central High School, where pure ventilation and cheerfulness are considered of as much importance as mathematics or Greek and Latin, where the placid brow and winning smile of the principal are more potent auxiliaries than ferules or frowns."

As the paper expanded more attention was directed to encouraging a literary spirit within the school. C. Harry Brock wrote a prize story, which was continued through several numbers, called "Education: a Tale of Philadelphia and of the High and Normal Schools," possibly the first of the great series of sketches which have connected the life of these neighboring institutions.

The High School Journal appeared monthly. Each issue was of eight pages, and contained accounts of any matters that concerned the school or public education in the city. A number of school essays were reprinted, and thus literary interest was stimulated. In its second year the name was altered, and *The School Journal* assumed the form of a magazine of sixteen pages. At first George Alfred Townsend and Oliver D. Martin were associated with the founder in the editorial conduct of the paper, and, commencing with the second volume, Henry C. Lukens was added to the editorial staff. Occasionally there were sketches of the members of the Faculty, illustrated with specially prepared wood-cuts. The essays of this period show a degree of sprightliness and humor which might well be expected from the vigorous tone of the school life at this time. While the subjects are trite and the style is at times juvenile, there can be no question that facility in expression was encouraged by a journal of this kind.

The public declamation and composition exercises held at the school on the evening of July 1, 1858, are exceedingly well reported, and some of the comments upon the speakers have especial interest from the after-prominence of the contestants. These exercises were inaugurated by Professor Hart in order to afford an opportunity to exhibit the work of the students before the public. A visitor was asked to suggest a subject for the composition and then a number of contestants were assigned to write upon that subject. Meanwhile the first part of the programme proceeded. A number of speakers (ten or twelve) declaimed, some of them having written their own orations. Upon the evening in question the

contestants were C. Harry Brock, George Alfred Townsend (who wrote an original essay upon the "The Poet," of which *The School Journal* reports: "In speaking he does well, but has not the advantage of a strong voice. He will make his mark as a writer rather than as a speaker"), J. J. Weaver, G. W. Mindil, Joel Cook (who spoke on "Protection to American Industry," an effort which elicited this scathing comment: "Mr. Cook spoke in too low a tone, and during his delivery held his body so far forward that we were afraid he would lose his centre of gravity. He kept his notes behind him as if afraid to show them"), Meyer Goldsmith, E. Payson Hipple (who delivered an original essay on "The Right of Search"), Samuel B. Huey (subject, "The Advantages of Education," but the severe critic reports: "Mr. Huey's delivery was excellent, but his voice is too weak; with age his voice will acquire strength and his efforts be much better"), R. S. McNeille, L. B. Norton, T. C. Stellwagon, P. S. Bell, W. H. Harrison, E. D. Ledyard, and T. Guilford Smith (who delivered an original oration upon "The Spirit of Generous Rivalry").

Meanwhile the contestants in the second part of the programme were writing upon a theme suggested by Professor Henry Coppée, of the University of Pennsylvania, —"Manners are the Shadows of Virtues."

When the declamations were concluded, the contestants were called upon to read what they had written. Ten compositions were thus read to the audience, some of the writers having been contestants in the first part of the programme. A jury of award was then selected from the audience, including Professor Henry Coppée, President William H. Allen, of Girard College, Henry C.

Hickok, State Superintendent of Schools, and a number of other well-known gentlemen. The verdict was publicly announced upon Commencement day, when the awards were given to George Alfred Townsend for the best declamation and to Edward D. Ledyard for the best extempore composition.

There can be no clearer picture of the happy and industrious student life than is thus gleaned from the articles in *The High School Journal.* Eventually, it again changed its name and broadened its scope (*The Family and School Journal*), but it was not then so successful as when it appealed to a limited but loyal group. After about two and one-half years of life the paper languished, and in 1859 publication was suspended.

Contemporary with this effort a series of papers was published by a student group, chief among whom was Joel Cook. Probably the first attempt to publish a paper in which all of the work was to be done by students was made in 1857 by Joel Cook and his brother Richard. *The Union,* whose motto, "Liberty and Union, Now and Forever," had a peculiar significance in these ante-bellum days, appeared as a weekly in the spring of 1857 and was published by "Cook & Norton." In the next year Richard Y. Cook, who had been admitted to the school in February, 1858, displaying an enterprise unusual in Freshmen, started *The Times,* which was announced to appear every ten days.

These papers sold for one cent, and were about five by six inches in size. They were printed on a hand-press, evidently the same for both sheets, even though the proprietors were rivals. All of the type-setting was done by the lads, who were at once editors, compositors, pressmen,

publishers, and newsboys. Even the press was made by the Cook brothers, and it is recorded that their parents, as well as near neighbors, were much alarmed at the terrific noise made by the crude machinery.

Eventually, in the autumn of 1858, a consolidation was effected, and thereafter *The Times* was published by "Joel Cook & Co." For over a year its prosperity was very great, and its appearance "every Wednesday" was eagerly looked for. The circulation reached five hundred, and as it was judiciously edited, it was generally well esteemed by the Faculty. "No scurrilous or otherwise offensive matter will be admitted to the columns" was the editorial platform, and hence the criticisms of the school management, which occasionally appeared, were confined to those facts of which the students might be expected to have accurate knowledge. There were a joker's page and a puzzle column, as well as complete reports of the various societies, clubs, and other interests. In its last numbers correspondence was admitted from the Girls' High School, and this custom has been happily continued in later magazines.

In December, 1859, the proprietors transferred their paper to the new firm of "Wetherill & School," but this was the preliminary to the usual catastrophe, which was inevitable on the graduation of the group most interested in the enterprise. Perhaps the most renowned journalistic success of *The Times* was the publication of the "Valedictory Manifesto," which was distributed at the Commencement of February, 1859, in defence of the students' position in the dispute over the distribution of Commencement tickets. The undelivered speeches of the recalcitrant orators were also printed in full in a special number.

That *The Times* occupied a necessary niche in the school life is best attested by the number of would-be successors that its suspension called forth. Of these *The Press,* published by "S. H. Dickerman & Co." (1860), was the best supported; but with the approach of the Civil War national interests absorbed the attention of the students, and so these attempts were not encouraged.

Both *The High School Journal* and *The Times* gave generous space to reports of the numerous literary societies that flourished in the decade before the Civil War. They were the product of an age in which effective public speaking was much esteemed, and they prospered because they appealed to the social instinct. A group of students would form an association which, after graduation, would be cherished zealously as a survival of the happy school days.

A complete list of the literary societies in which High School students were active from 1850 to 1860 would fill several pages. Among the most successful may be mentioned Otis, Bache, Hart, Harrison, Innominati, Prescott, Philadelphia, Bryant, Pennsylvania, Adelphian, Morris, Keystone, Graduates', Delta, Bancroft, Southwark, Everett, Constitution, etc. The Literary Congress was composed of three delegates from each society. Elaborate lecture courses were arranged by the more flourishing societies. In 1859, Wendell Phillips and Horace Greeley lectured before the Harrison Literary Institute. The programme of the Literary Congress of the preceding season gives the names of Horace Mann, T. Starr King, George D. Prentice, Hon. Anson Burlingame, Hon. John P. Hale, and John G. Saxe. By reporting the proceedings of these societies with elaborate de-

tail, and by personal criticisms that were always sprightly and honest even if occasionally juvenile, the school papers stimulated the general interest in this phase of student life.

Any account of the early journalism that omitted *The Bush Eel* episode would lack its most exciting feature. The two numbers of this famous journal appeared in October, 1856, and June, 1857, and the series was continued the next year by the single issue of *The High School Reporter*. Single copies of these papers have survived, and the sensation that they created is still vivid in the memory, though the authors of the mischief are unknown. While the ethics of anonymous journalism must always be open to reproach, there can be no question that this paper was ably edited, vigorous in its judgments and virile from its point of view. It was the manifestation of an extremely active school intelligence, and while the better element of the student body did not support the paper, it persisted because its publication involved a continuous competition between the editors and the Faculty to see whether the identity of the former could be discovered. It received its name from a serpent which it is reported to be dangerous to crush, and its motto was as follows:

"I ask respect, and as I hold
The scales in equal balance free,
I say to those who seek to crush,
Take care; don't tread on me."

Its description of the opening of the Central High School in August, 1856, written by "Black Hawk," would apply to a prison of the Inquisition.

"The members of the Senior Class were naturally exuberant at the idea of having to pass only five months more

of purgatorial existence, at which time they would emerge from the Temple of Sin. The Junior and Sophomore Classes were on the very brink of despair at the bare idea of two or three years' more submission to tyranny. The Freshmen were not sufficiently versed in the terrors of High-Schooldom to know their miseries." Several of the comments on the members of the Faculty were decidedly uncomplimentary.*

With the second issue of *The Bush Eel* came the catastrophe that ended its career. Professor Hart gave solemn notice that any student detected in circulating copies would be punished with immediate expulsion. One unfortunate fell into the hands of justice and was summarily dealt with; but afterwards the Senior Class petitioned for his reinstatement, pledging their word that *The Bush Eel* would cease to rattle, and, with the genuine moderation that always characterized Professor Hart's administration, the pledge was accepted and the culprit, who is to-day an eminent and useful citizen of Philadelphia, was restored to membership in his class.

During the Civil War the attention of the more enterprising students was directed towards the great political questions of the day, and consequently there was less interest in school problems. In many cases the leaders of the classes enlisted, and thus left a void which was

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* One of the cleverest verses in the paper was "An Epitaph to a Dutch Boy(é)," the authorship of which has recently been admitted by "Gath":

> "Here are his bones beneath this mound of earth,
> A chemist to virtue and to truth unknown;
> Fair Science smiled not on his homely birth,
> And Satan marked him for his own."

naturally felt in the school life. Not until April, 1867, was there any attempt to produce a school journal, and then the impulse came from the Freshmen. *The G*[1] *Herald* was a modest hand-written paper, whose single copy circulated freely from hand to hand through the class. Its editors are unknown, but as that one section of the Fifty-sixth Class contained Abraham M. Beitler, William Wilkins Carr, George J. Garde, and William H. Greene, it would not be hard to find competent workers. During its two months of life its chief characteristic was a profound loyalty to the new principal, Riché, and a thorough confidence in his plans for the school.

Two years later the Fifty-fifth Class, then in B, promulgated *The Portfolio,* a monthly in every way worthy of the school, and which for three years satisfied the natural demand for an organ. Its first volume (until February, 1870) was edited with rare unostentation, for while there was no anonymity about their work, the editors announced in their paper only the place of publication. But in the last number the names of the workers were made public, and rarely has there been a group more active as undergraduates or more worthy as Alumni,—Dewey Bates, Craige N. Ligget, Frank P. Prichard, and Samuel E. Cavin.

Upon their graduation the control of *The Monthly Portfolio,* as it was now called, passed to the Fifty-eighth Class, and its new editors, Frank Rigler, Robert N. Simpers, and W. H. Rock, announcing their names but once, took up the work for the next year. Then the Sixty-first Class, while in C, fell heir to the paper, and its last editors were William H. Peterman, John W. Roberts, and Andrew J. Parker. Its final issue was in November,

1872, when its editors announced suspension of publication because of lack of student support. A more potent reason was the absence of permanency in its organization. It was a personal concern, each group conducting the paper as it pleased and selecting its successors; but, as a rule, its columns were carefully edited and the school news was faithfully reported.

The early success of *The Portfolio* brought rivals into the field, and in the autumn of 1869 a group of Freshmen published *The Boys' Gazette.* Its editors were Frank G. Odenheimer, T. A. Burtt, and R. L. Shedaker, the first and third being students in H^3 at the time of this venture. Eventually this paper expanded into *The Weekly Record,* heralded as " the best paper in the world for boys," and Charles D. Shain and L. H. Coleman were added to the editorial staff. As the enterprise became better established the business management became more adventurous. After the summer vacation of 1870 the paper was distributed freely to all students, and was supported solely by advertising. While the school supplied the majority of the editors, *The Weekly Record* was not designed to be an organ of the High School alone. When *The Portfolio* was abandoned by its last editors, a group of the Sixty-second Class (William C. Craige, Norman B. McCormick, George W. Janvier, and later William D. Yerger) published *The High School Journal* for a term. But, despite the ability and enterprise of these various class groups, their work lacked permanency in management, and hence it did not endure.

In the Centennial year there was a journalistic revival from which the school received a strong influence. Early in 1876, " Wayne & Doster," two former students of the

High School in the Sixty-eighth Class, issued a monthly called *The Sun,* in which a column was saved for High School news. The senior member of the firm, Charles Stokes Wayne, was afterwards known as an author and editor. *The Literary Times,* published by "Hancock & Ellis," was issued semi-monthly after April, 1877. It was the organ of the High School Literary Society, and served its purpose well. *Our Boys and Girls,* a contemporary, was a juvenile paper, for which several High School students worked, and in which school news was chronicled. But these experiments did not suffice for the needs of the school constituency. There was a general desire for a permanent organ, not only for the circulation of school news, but also for the expression of student opinion. *The Mirror,* founded in 1885, has been successful through its unique organization and gives promise of continuity so long as the school shall exist.

The Eighty-sixth Class, graduating June, 1886, had a most vigorous and virile life. Its class spirit was strong, and its organization was in the hands of able and efficient leaders. The project of a school paper had frequently been discussed and this class determined to lead. While in B (as the first half of the Senior year was then called) a class meeting was held on September 13, 1885, to discuss ways and means. A committee of three was appointed to formulate a plan, and after a month's consideration a complete report was presented to the class. In outline it provided for a monthly paper to be published by the Eighty-sixth Class during its last year (two terms), and thereafter by each succeeding graduating class. To secure the necessary capital it was suggested that fifty shares of stock, at fifty cents per share,

be issued to the class; the paper to be sold for five cents per copy. All of the main features of this report were adopted unanimously, and the only division was as to the naming of the proposed journal. When the vote was taken, the meeting was found equally divided between *The Mirror* and *The Spectator,* and it was the vote of the chairman which settled the question.

At this meeting the first editors were elected. Horace M. Rumsey, who was the moving spirit in the project, was elected editor-in-chief. After graduation from the Central High School Mr. Rumsey studied law, and is now a prominent member of the Philadelphia Bar. The associate editors were George W. Hyde, Jr. (now Assistant District Surveyor in Philadelphia), Milton J. Rosenau (now a surgeon in the naval service), and Clinton Rogers Woodruff (now attorney and counsel for the Municipal League). The chairman whose vote christened *The Mirror* was William P. Brines, afterwards a prominent clergyman of the Methodist Episcopal Church. Such was the first editorial group. The staff has developed in both numbers and organization since this beginning. At first there was no department grouping. Mr. Hyde assumed charge of financial matters, but without any special title. In January, 1886, Wilson R. Stearly was chosen as an additional editor, and so the staff continued until the graduation of the class.

The first number of *The Mirror* appeared in November, 1885. It was four pages in size, without cover or illustrations, with but one advertisement, and that for but a half-inch; yet there were certain characteristics that may be found in all the later volumes of the series. Personal notes, called "Reflections," were a feature;

there was an editorial salutatory that reads strikingly like some of its successors; and there was the usual fiction, but it was a story of school life.

The first article was a parody, so cleverly executed as to be worthy of reproduction, and especially memorable for its priority:

"THE DISCONTENTED SCHOOL-BOY.

"To leave or not to leave, that is the question:
Whether 'tis nobler in the mind to suffer
The zeroes and notes of outrageous school-life,
Or to take arms against a sea of troubles,
And, by leaving, end them? To leave, to work—
And, by working, end the thousand natural
Headaches, troubles, and dissensions
That school-life is heir to—'twould be a consummation
To have no more studies. To leave, to work—
To work! Perchance to fret! Ay, there's the rub;
For in that fretting for one's livelihood,
Might it not be worse than study?
This makes us pause! Who would fret over lessons,
Stay home in the afternoon and scratch out a drawing,
Instead of going to the base-ball match?
But that the dread of work—from whose realm
No one e'er returns to school—puzzles the will,
And makes us rather bear the ills we have
Than fly to others that we know not of!

"MILTON J. ROSENAU."

The first volume contained eight numbers, gradually increasing in size to twenty pages. The editorials were healthy and vigorous. Some practicable recommendations were made; as, for instance, that the sections of the lower classes should combine and maintain a class organization earlier in their school life. In the second number Alumni Notes were introduced,—a feature which has become permanent. The first illustration appeared in the

fourth number, and was, *mirabile dictu,* a sketch of a proposed new building for the Central High School. The artist, after the manner of Bellamy, transplanted himself to the year 1925, when the school was occupying the new buildings. His ideal was plain in exterior, vast in proportions, nine stories in height with an observatory, and with a playground adjoining as big as the Parade Grounds! And, of course, a flagpole, that the traditional class fights for its possession might be maintained.

Unusual interest was shown in base-ball; there were school teams, sectional teams, and group teams, these last far more numerous than to-day. Fifteen years ago there was more athletic activity among the sections than at present and less competition with teams from other institutions. Regular schedules were prepared for sectional teams, and at the close of the season batting and fielding averages were carefully computed and published in *The Mirror.* There is an interesting note in the third number referring to "red and blue" as the school colors. The "crimson and gold" were not officially adopted as the school colors until 1888, when the semi-centennial of the founding of the Central High School was celebrated. Prior to that time, and for some years succeeding, each class had its own combination, but with the adoption of these "colors of the sunrise" this variety began to disappear.

The influence of *The Mirror* upon school life has been marked. It is pre-eminently a school paper. A higher literary tone has been developed within recent years, but it would be impossible to find a greater appreciation of the varied sides of the school life than in its earlier numbers. The loyalty is fine and the earnestness is apparent.

Through its sectional correspondence it has exerted a powerful unifying force upon the student body. As soon as a school organ was provided, a number of new activities began to be developed. In the autumn of 1886 the football team was revived, and has since maintained a continuous and generally successful existence. In January, 1887, an Economic Society was organized for the study of the problems of political economy. It is noteworthy that the first president of the society was John L. Stewart, who to-day occupies the chair in that subject at Lehigh University.

In its relations to the Faculty *The Mirror* has been unusually fortunate. It has been honest and open in its suggestions; and sometimes, as in its agitation for a change in Commencement methods, etc., it has aided in a reasonable reform. The first steps towards organization were materially helped by Professors E. J. Houston and M. B. Snyder, both of whom contributed largely to its columns at a time when such assistance was absolutely necessary for success.

Such, then, is the story of the founding of our school paper. It is now concluding its sixteenth year and its twenty-first volume. Prior to 1892 two classes were graduated each year, and each edited *The Mirror* for five months, so that the number of volumes is in excess of the number of years. By suggesting that each Senior Class should in succession edit the paper the Eighty-sixth Class insured its perpetuation. *The Mirror* has now passed out of the experimental stage; and, with the expansion of the school, its continued prosperity is assured.

When the young lads whose journalistic work has thus been described engaged in a work so full of pleasure as

well as discipline for themselves, they little thought that the time would come when what they wrote in the careless pride of boyhood would be read with scrupulous care, in order properly to judge the temper of the school during these varied times. The newspaper is sometimes the most satisfactory record for the historian.*

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* In this list of school papers mention should be made of *The Pedagogue,* published by the Third Class of the School of Pedagogy and devoted to the discussion of educational questions. Its first appearance was in December, 1893, and the volume contains seven numbers. Its editors were Samuel L. Chew, William H. Mearns, William G. Jones, and George V. Z. Long. While this paper did not permanently endure, it was the first distinctly professional paper to be published by the teachers of this city, and thus a movement was inaugurated that later culminated, with the co-operation of these young men, in the establishment of *The Teacher,* the educational organ of Philadelphia.

CHAPTER XII

THE STUDENT AT PLAY

In the early days of the High School it was evident to its administrators that some provision must be made for the physical activity of growing boys. Dr. Bache, in his plan for the reorganization of the school, submitted in 1839, urged upon the Controllers the immediate necessity for a playground in the vicinity of the school. "A system of education, to be complete, must combine moral, intellectual, and physical education. . . . The managers of city schools have, in my opinion, a further duty to perform,—namely, to promote directly the health of their pupils by providing a playground to which the boys may go before and after school hours and during the hours of study, at the intervals expressly devoted to air and exercise." He also recognized that play, under proper direction, is a potent factor in moral education, and hence his proposition embodied the provision of an officer for supervision.

The early friends of the school were not slow in responding to so convincing an argument, and in 1840 a lot was purchased in the rear of the building, and the playground was placed under the general charge of the janitor. The boys were eager to avail themselves of this new privilege. The long, unbroken wall of the United States Arsenal to the south afforded a splendid backing for handball, and this became the favorite game. "Base-

ball was not born," says Professor Howard, "but town-ball, in which a shot with the ball stopped the runner, was the parent." It is probable that there were no formally organized school teams in these early days, and the advantage was clear,—all took part rather than the expert few.

Dr. Bache was keenly interested in the influence of these boyish sports upon character. A few months after the opening of the playground he stated that the opportunity for exercise in the open air, and especially for "the free development of character by the boys," was a most valuable phase of the school life. And that the boys responded to the trust reposed in them is best illustrated by the story of the lad who, chafing under some punishment, sneered at the principal on the playground, and was at once knocked down by an indignant classmate. No bad language was allowed, and exclusion from the ground was the first punishment, but Dr. Bache reports that there were but few violations of this rule. "I have endeavored to impress upon our pupils," said he, "that impure language is the first step in a downward career ending in vile actions."

Even the games were studied, so that their effects upon the pupils might be determined. Games that had for their object the infliction of pain were not tolerated, though no objection was made to those which incidentally were attended by hard knocks. "Football is one of the games which tries both temper and fortitude, and on its first introduction in its appropriate time of the year considerable watchfulness is required to prevent quarrels; after a few days' practice this danger disappears."

When, in 1842, Dr. Bache presented his last report, he

expressed entire satisfaction with the result of his experiment, and could only recommend that the playground should be enlarged, and also that it should be covered in part, in order that its gravel bed might not be rendered unfit for use in rainy weather. For eleven years this playground was one of the most efficient agents in the school life; but in 1851 the prospective removal of the school led to the sale of the lot, and as a result recess was curtailed and, for a time, even abandoned.

Around the second school building there was a brick-paved enclosure, not large enough for formally organized games; hence, in the traditions of the Alumni, this yard is associated with recess, with its mad scramble for lunch, and an occasional fight or rush around the flagpole.

There was no formal competition, nor were there school or class teams in the early period. Indeed, prior to the Civil War there seems to have been little attention given to formal athletics among the youth of the High School age. Probably the main reason for this was that there were many green fields within the limits of the First School District, and the ordinary walk to and from the school gave sufficient opportunity for exercise and change of air. "Gath" records in his memories of the school that during his four years' course his daily walk amounted to a total of one-fifth or one-sixth of the earth's circumference.

It is interesting to notice that during President Hart's administration the students were more interested in literary and debating societies than in athletics. Yet, even with this devotion to purely intellectual pursuits, there was in every class an athletic group who formed teams

and played in such exercises as were then in vogue. One of the first games to become popular was cricket, and in the late fifties a number of classes organized cricket teams. The Thirty-fourth Class contained the brothers Waterman, and there were frequent matches arranged between different groups of students.

During the Civil War there was an interesting athletic development when the old game of "town-ball" was rechristened "base-ball." It is believed that the first town-ball club, called the Olympic, was established in 1833. It was a very popular game, and was played on the town lots. In 1863 the Active Club was organized in the Central High School, and contained several players who have since attained to honorable eminence. The captain was Edmund C. Hopper, a son of Professor Hopper, and among his associates were P. Frederick Rothermel, Jr., late district attorney of Philadelphia, J. B. Worrell, and Alfred M. Herkness. The Active Club played with the Minervas and the Olympics, but as no other near-by school or college had a base-ball team, it had no competitors of its own class. One of the best known of the High School players in athletic history was John P. J. Sensenderfer (afterwards county commissioner of Philadelphia), who went into professional base-ball in 1866, joining the Athletic team. The players received no pay, except that their expenses were paid, but at the end of the season the surplus was divided among the members of the team. The Athletics played Princeton every year and had occasional contests with Yale and Harvard, as the base-ball fever spread over the country. The principal rules were quite similar to those which now govern the game, except that the ball was pitched under-

hand, and there were neither gloves, uniforms, nor masks. It is related that President Maguire, like Dr. Bache, delighted in athletics, and watched over the boys at recess, sometimes directing their energies towards jumping or snowballing or other pastimes.

In the early seventies there seems to have been little organized athletic activity. There was no provision either for gymnasium or playground, and the yard space around the school building was only large enough for an occasional class rush, or perhaps for a game of the time-honored "Baby in the Hat."

The organization of athletic interests came after 1870, and was due in large measure to the rapid expansion of Philadelphia. As year by year new building operations were undertaken the green spots within the city limits began to disappear and the country was pushed away. Then it became evident that the best physical life demanded that there should be provision for exercise, and since there was no opportunity within the school, the boys made a way for themselves. Thus commenced the faithful use of Fairmount Park.

Dr. J. Kinzer Shell,* who has devoted many years to the study of the best methods of physical education, has recorded his recollections of the recreations of the students of the High School.

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* Dr. J. Kinzer Shell was graduated from the Central High School in February, 1878 (Seventy-first Class). After a medical course at the University of Pennsylvania he was for ten years Director of Physical Education at Swarthmore College, and from 1898 to 1901 Professor of Physical Training at the University of Illinois. His return to Philadelphia to accept a similar position at the University of Pennsylvania has recently been announced.

"From 1873 to 1878 the regular stamping-ground of the boys was in Fairmount Park, on a plot of ground at the foot of Thirtieth Street, just north of the statue,—the Wrestlers. The present Poplar Street entrance would cut the old ground in half; it extended from the railroad to the road going to the guard-house at Sedgely. Upon it were laid out several ball fields for spring work, and in the fall it was used as a football field. The road and walk were utilized as a running track. Across Broad Street, north of the lumber-yard then on Brandywine Street, was a lot on which the new school now stands, where many early morning games of base-ball were played and impromptu jumping and running races occurred. Another favorite ball ground was on the level ground west of Broad Street, between Monument Cemetery and the old Punch Bowl Tavern, then near to what is now the northwest corner of Broad and Diamond Streets.

"The boys who lived north of Market, south of Poplar, and west of Ridge Avenue used the Sedgely plot for their sports. Those east and north of Ridge Avenue used the Punch Bowl territory. Those south of Market congregated at various lots around South and Catharine Streets and Broad. Games of base-ball were continually arranged between various school teams of these different localities. The lines of residence were very distinct and rigid, and in a great measure followed the various volunteer fire company districts. The minor local lines gradually merged into a general field of the three localities above mentioned. About 1875 picked teams played representatives of these districts, and the Park district, whose team contained Robinson, Nusbaum, Long, and Atwood, won. In 1876 the Punch Bowl contingent (of whom I only recollect Mawhinney) had the best collection of ball players.

"It was in 1875 that the lower classes, E, F, G, and H, had sectional teams playing match games, with a regularly picked selection of players representative of their various sections, and, if memory serves me right, the '3's' generally won,—my H^3 with Pim-Kerper-Nicholson won, so we did next year as G^2, and the following year as F^1,—the old ball group progressing in playing ability as in school standing. I think it was in E that we consolidated the class and formed a team (the first time, I think, that the lower classes picked from their entire number), and we made a good fight, but B, led by Alex. Robinson, beat us. In 1876 the custom became universal, and the picking of the teams gave the first instructions in wire-pulling to some who are now national politicians.

"In this year was commenced the custom of selecting a school team by some natural leader in A, and this team played games with the Rose Hills and the Red Cross where the old Girls' Normal School stands (Seventeenth and Spring Garden Streets). Games were also played with Rugby and Episcopal Academies. At this time it was not always the best players who were chosen; generally it was a question of how much the self-appointed captain liked the different boys, and sometimes a few of the boys would give up the locality team for the school team. But in the fall of 1876 we started a regular athletic association, and elected some officers and appointed captains upon the basis of merit and not of popularity.

"We had a football captain, A. Robinson, of A, and we had regular match games of football,—not the Rugby game, but on lines more approaching the Harrow game, allowing no running, but the bounding of the ball, hitting with the hand, and a free kick on a caught fly. Games were played with Lincoln Grammar School, Rugby and Episcopal Academies; not with invariable success to the Central High School team. In 1877 we took up the game under Rugby rules, and spent hours trying to learn a drop kick with a rubber football. That year we played a practice game with the University of Pennsylvania (containing White, Hart, Thayer, Barlow, Dick, etc.), and we made three touch-downs to their one,—no goals were kicked, for we had no goal-posts. Our team that day, I think, consisted of Robinson, S. D. Kuhn, Miller, Geisel, Nichols, McCombs, Volmer, Nusbaum, Bell,* and Shell.

"We did not think so much of that game as of another that we played with the Crescents, a team composed of Lincoln Grammar School, past and present. We played the above men, and in a manner very similar to a lacrosse game. There was no off-side nor on-side after the kick-off; you could throw the ball, but not ahead; you could catch it and run, and be tackled. We played for the honor of our school and for the name 'Crescent,' and we won and kept that name. After this the school maintained teams, and we old boys kept together and played as a team, filling up with the best of the school-boys. The old High School Crescent team played

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*John C. Bell, of the Seventy-fifth Class, now a prominent member of the Philadelphia Bar, and for several years chairman of the Committee on Football of the Athletic Association of the University of Pennsylvania.

yearly matches with the University down to 1885 or 1886. It became a High School team, past and present.

"Track-work engaged our attention in 1876. In November a circular was printed and distributed in which entries were solicited, and the games held Saturday, November 11, 1876, at 10 A.M., at the Park Grounds, with these results:

"100 YARDS.

"*First Heat.*—1. Robinson, 11¾ seconds. 2. Miller. 3. Thomas. 4. Brown.

"*Second Heat.*—1. E. Van Deusen, 11 seconds. 2. Shell. 3. Cressman. 4. Sherrer.

"*Third Heat.*—1. Hill, 11 seconds.

"*Final.*—1. Hill, 10¾ seconds. 2. E. Van Deusen. 3. Robinson.

"STANDING JUMP.

"Miller, A, 8 feet 6 inches; Cressman, B, 8 feet 6½ inches; Chase, C, 7 feet 9 inches; Tait, D, 7 feet 9 inches.

"BASE-BALL THROW.

"Won by E. Van Deusen, 113½ yards.

"THREE-MILE WALK.

"1. Shell. 2. Walker. 3. Miller. 4. Thomas. First mile, 11 minutes; second, 23 minutes; third, 32½ minutes.

"WRESTLING.

"1. Hill. 2. Chase.

"440 YARDS.

"1. Hill, C. H. S. 2. Chase, U. of P. 3. Shell, C. H. S. 60½ seconds.

"The other events were not contested on account of the rain. The 100-yard dash we ran on the gravel walk; the 440 on the gravel, around a turn, and up the road. The walk was on this quarter-mile track with a complete turn around a post at each end of the track. No one had spiked shoes except Hill and Chase.

"The first class meet was held on Washington's Birthday, February 22, 1877, at Elm Station; we had a 100-yard dash, mile run, mile walk, 440, broad jump, and hop, step, and jump. Stanley Flagg won the mile walk, Klemm won the broad jump, Nichols the 100, Shell the 440, Hillman the high, Murphy the mile, and Van Deusen

the hop, step, and jump. Nearly every member of the class made some place of sufficient merit to get one prize.

"From 1876 to 1878 we had an athletic organization of boys widely distributed over the city. Hill was from Haddonfield; Chase, Chestnut Hill; Nichols, Moyamensing; Hillman, Kensington; Van Deusen, Tioga, etc. Our activities and the formation of the teams were dependent upon the fancies of the majority. The schedules of games was made by us, all together, at recess around the old flagpole. There were no dues. Still, we had enjoyment!

"Some of the leaders in athletics were Autenreith, B; Hand, C; Long, D; Aaron, A; Hunsicker, A; Williams, D; Shell, B; Nusbaum, C; Hill, C; Kuhn, F; Woodward, F; Geisel, D; Van Deusen, D; Woodruff, D; McComas, G; Paramour, D; Wilson, C; Wylie, D; Walton Pennewill, C; Ira Pennewill, D."

Together with this interesting account of the athletics of a quarter of a century ago Dr. Shell sent a copy of the handbill which was distributed by order of the Student Committee, calling upon all to observe the "regular semi-annual Athletic Day of the Central High School" upon November 11, 1876. In the preamble it is stated that "The Present Graduating Class has decided: first, to show that spirit of union which identifies student and Alma Mater; second, that the college system of boat-races is impracticable; third, that athletic sports should therefore be adopted." From this movement developed the athletic exercises so well known to-day and which have aided materially in developing an *esprit de corps* among the students.

During the eighties base-ball continued to be the favorite game. Leagues were organized among the various schools and classes, and at times a formal schedule of intersectional games was arranged. They were played usually in the East Park, and the basin of the large city reservoir, which remained for many years unused and unfinished, made a splendid diamond. Several

teams were named after members of the Faculty, and the students of the period from 1885 to 1887 will recollect the "Thorpes," the "Houstons," the "Howards," and the "Bucktails," and the famous contests between these champions. The establishment of the Central Manual Training School, in 1883, gave a rival for school sports, and soon joint competitions were arranged. Presently interest in athletics broadened. In 1884 the Intercollegiate Football Association was formed, and the popularity of the game soon caused its extension to institutions not included in this group.

It will be noticed that until this time athletics in the school had been in large measure a family affair. There were interclass games and intersectional games, but few formal competitions with students of outside institutions. The old plan produced less expert athletes, but it had the great advantage that it increased materially the number of students who took part in the games. It is entirely fair to assert that there were periods when one-half of the student body took part in school base-ball; but with the development of athletics the desire to produce expert teams that would be victorious in outside competition led to the selection of the few who could play best, while the many who had formerly taken part in school contests now contented themselves with contributing to finance the athletics and with applauding the efforts of their more expert brethren. Several times the Central High School has entered into close athletic relations with a number of institutions. Sometimes friction has resulted, for boys are not always able to solve satisfactorily the administrative difficulties which management on a large scale invariably entails.

The great development in the undergraduate life of the school that came about 1888-89, very largely as the result of the enthusiasm over the celebration of the semi-centennial of the establishment of the school, resulted in the rapid expansion of interest in athletics; and in the service of football came the establishment of a school yell as a formal institution. It was in the autumn of 1889 that the school had one of its great football elevens. "Billy" Wood, of the Ninety-fourth, according to the old system of numbering classes, was captain; William J. Glackens, who after graduation became an illustrator for *The Press* and later for *McClure's Magazine,* was full back; and on the line were the leading athletes of the school, Rutter, Bendig, and Pynchon. One day in November a game had been scheduled with their traditional rivals, the Manual Training School, to be played on the grounds of the Young Men's Christian Association, at Forty-fourth Street and Elm Avenue, but recently opened. At recess on the important day a knot of upperclass students gathered around the historic flagpole in the yard, discussing the forthcoming game. It was then suggested that some general cry should be adopted to cheer the High School team. A number of yells were immediately proposed, and after several trials, some one, whose name is not known to the author, raised the cry which was unanimously adopted. It was the famous

Central Re!
Central Rah!
Central High School,
Siss! Boom! Ah!

The yell was not wholly new at that time, as in the flagpole fights various class and sectional cries had de-

A CORNER IN THE BASEMENT, 1900

veloped. It had been used in the previous November, when upon the night of the Presidential election several hundred High School boys marched down Chestnut Street celebrating the victory of Harrison; but it is believed that it was not until 1889 that it was finally recognized as the school yell. Never since then has there been any desire to revise or to alter the cry which has cheered many a team to victory and has furnished zest on scores of school occasions.

There are to-day six recognized forms of athletic activity,—football, base-ball, rowing, track athletics, basket-ball, and cricket. For many years there has been a football team, and it is reasonable to suppose that so long as this game retains its popularity the school will be loyal in its support. The same may be said of base-ball. In 1897 a crew was organized, largely through the efforts of two of the members of the Faculty, Dr. J. D. Spaeth and Professor Philip Maas. In each successive year a crew has been put upon the water, and a number of victories have been won that have contributed materially to the interest in this sport.* Track athletics have been popular for many years, and from 1887 to 1899 school sports were held regularly and generally twice in each year. In recent years attention has been directed more towards those games in which competition with

* In the Interscholastic Rowing League, the High School was defeated in 1897 by Penn Charter, but was victorious in 1898, 1899, and 1900, and by its successive victories the school has won the cup for which these contests were held. That rowing is popular, in spite of the long and severe training, is best attested by the fact that when the call for candidates for the crew is issued the response is very hearty, from sixty to seventy students competing in the preliminary work on the rowing machines.

other institutions is possible, yet the school still maintains a track team and has produced a number of athletes of more than local reputation.*

Within the last four years basket-ball has become very popular, chiefly because its season, the winter-time, gives it a monopoly of athletic interest. In 1900-01 the school team achieved rare distinction by defeating the quintettes from Princeton University and Lafayette College.

The sixth sport supported by the students is cricket, and this team has worthily maintained the traditions of the days when it was the absorbing game. The school is represented in tennis, in hockey, and in all other games of which healthy, growing boys of from fifteen to nineteen years may be expected to have knowledge.

As the interest in athletics increased the problems of management became serious. There were a number of lads whose scholastic records suffered on account of their devotion to more congenial pursuits. There were also suspicions that sometimes an Alumnus would return to take part in a game with his former colleagues, and this

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* The school records are as follows:

100-yard dash, Dana L. Chesterman	10 3-5 seconds.
220-yard dash, L. F. L. Pynchon	23 4-5 seconds.
440-yard dash, L. F. L. Pynchon	55 1-5 seconds.
220-yard hurdle, L. F. L. Pynchon	29½ seconds.
Running high jump, L. F. L. Pynchon	5 feet 8¼ inches.
Running broad jump, John A. McGlinn	19 feet 9½ inches.
Standing broad jump, L. F. L. Pynchon	9 feet 6½ inches.
Putting 16-pound shot, L. F. L. Pynchon	31 feet 3 inches.
Half-mile run, John Gubbings	2 minutes 10 2-5 seconds.
One-mile run, W. W. M. Bending	5 minutes 7 seconds.
Two-mile run, E. C. Rutschman	11 minutes 29 1-5 seconds.
Half-mile walk, G. L. McDowell	3 minutes 36 seconds.
One-mile bicycle, Frank Zook	2 minutes 41 2-5 seconds.

was forbidden by amateur rules. Finances became a complicated problem, when the receipts from each series of games and the collections from the students were to be applied to definite purposes. In the spring of 1898 the Faculty determined to establish an Athletic Council, and after careful consideration its organization was effected. In its first form it consisted of twelve members: three representatives of the Faculty, to be appointed annually by the President; three Alumni, to be chosen by the Board of Managers; and six undergraduates, comprising the captains of the football, base-ball, crew, and track teams, and two undergraduate members at large, to be elected from the entire student body. The Council is placed in entire charge of everything that relates to athletics in the school. It has formed rules of eligibility and has taken measures to secure their enforcement. It has entire charge of athletic funds and authorizes all disbursements. It has received money from the Alumni and has applied such gifts to their proper purposes. The election of the two undergraduate members forms an interesting episode in the school life, inasmuch as it is the only occasion on which the students of all classes unite for the purpose of selecting from their own number those who can best transact their business. The Alumni members have shown much interest in their work, and by their experience have helped materially in giving system to the athletic organization. The three representatives since 1889 have been John R. Fanshawe, Thirty-fifth Class, Secretary of the Lehigh Valley Railroad; William H. Staake, Forty-fifth Class, who is the legal adviser of the Council; and Dr. Edwin J. Houston, Forty-third Class, who has worked so zealously for the boys of Philadelphia.

As the school has increased in membership, and as the expansion of Philadelphia has resulted in the removal of the meadows that in earlier years surrounded the building, there has been a great demand for a field upon which the students of the school might exercise. The city has met this need in part by supplying grounds in Fairmount Park for all forms of athletic games and open to all citizens. With close and friendly relations with neighboring institutions, however, there has been a strong need of some place which could be regarded as peculiarly the athletic home of the High School students. The Alumni have taken much interest in this question and various attempts have been made to secure grounds for this purpose. The students have organized an athletic association, membership in which is of course voluntary, and from the dues they have secured sufficient income to lease the privilege of using one of the private athletic fields of the city upon certain hours of specified days. This arrangement is a great improvement over former conditions, yet it is hoped that the city will soon see its way clear to give to the students of the higher schools grounds which they may count as their own for athletic purposes.

It may be questioned whether the wild devotion to athletic pursuits which characterizes a great many educational institutions is a healthy sign of the times. Certainly there are a great many older Alumni who will remember the literary institutes and the debating societies which flourished in the forties and fifties, and who cannot readily understand why these improving associations have died out or have been replaced by others which seem less lofty in their ideals. The High School was not designed for the glorification of muscle, and it is noteworthy

that while many of its sons have won athletic renown in their school days and later at the universities, there are comparatively few who have become professional athletes. Nevertheless, two very distinct services have been rendered by the school games, apart from the direct physical benefit to the participants. In the first place, in the management of the games the boys have acquired a helpful knowledge of business methods that has contributed to the practical value of the school. Secondly, athletic games have developed and strengthened an *esprit de corps* among the students in the most efficient way.

As the school becomes larger it is almost impossible for the students of the various sections to get in touch with one another. If there were not some common interest outside of the school there could not be full companionship among youths who are scattered all over the city, whose personal and home interests are varied, and whose lines of work in the school do not bring them together. If it were not for the companionship of an athletic team and, better still, for the attendance upon school contests, the average student would know but the few who compose his own group, and he would have little chance for the more extensive acquaintance which is so helpful a part of healthy school life.

The High School boys attend their athletic games with great regularity; they manifest enthusiasm to an unusual degree; they exult over victories and are depressed by defeats, and through this common interest the members of the school become acquainted with one another.

No stronger argument for the maintenance of athletics can be urged.

CHAPTER XIII

THE MODERNIZATION OF THE SCHOOL

In the fifteen years that have elapsed since the resignation of President Riché the administration has been vested in Franklin Taylor, Zephaniah Hopper, Henry Clark Johnson, and Robert Ellis Thompson. So complete has been the change in teachers, curriculum, and methods that with the altered environment in the new buildings the school seems to have been entirely remodelled, and an Alumnus of the Riché period would feel lost in contemplating the life of to-day. Until 1887 new classes were admitted twice in each year; since that date but once. Prior to 1889 there was but one course of study; since that time the principle of election has been developed to an unusual degree. Under the old dispensation, offenders were punished with misconduct notes having a cumulative effect; under the new régime, there is a Faculty Committee of Discipline, with plenary powers, which tries offenders and metes out the penalties. Formerly recitations were marked on a scale of ten, and averages were carefully computed, even to the second decimal; to-day five letters are used as marks (*E*xcellent, *G*ood, *F*air, *I*nferior, *D*eficient) and the grades are more general than under the old plan. Promotions were formerly made on a general average, while to-day the student must obtain at least a grade of "Fair" in each subject before he is advanced in full standing to the next class. A term aver-

FRANKLIN TAYLOR
President, 1886–1888

age of ninety-nine under the old system is a very different thing from the same grade under the new, and the former indicates a much higher standing. Formerly the Faculty held regular weekly meetings and was the governing body of the school; under the present plan the instructors of each class in turn meet weekly to review the records of the students, and a Faculty meeting is called only when there is business to be transacted.

That much has been gained in recent years is beyond all question. The old system provided an excellent administrative machine, but not without the defects of machines, in that there was a tendency to sacrifice spirit to detail. But no Alumnus familiar with the history of the school can fail to regret that in its reconstruction, under the direction of executives who knew little of the noble traditions of the past, so much of what was good and sound in the methods of their distinguished predecessors has been lost.

The shortest administration in the history of the school was that of Dr. Franklin Taylor, whose term lasted but two years. As he was suffering in health during the greater part of that time, whatever plans he may have formed for advancement were not developed. Eventually he was given a year's leave of absence, and the senior member of the Faculty, Zephaniah Hopper, was placed in charge. Professor Hopper has twice served as acting President, and by his excellent judgment and assiduous devotion to duty he has averted the disintegration which vacancies and disabilities have threatened.

There were several changes in the Faculty during this period, and in the selection of new men competitive examinations were generally employed. Francis Newton

Thorpe, who served for several months in the Department of Literature and History, was among the first of the "new Faculty,"—a term which has been applied to the young and university-trained men of the teaching force. In 1886, Henry Willis, William L. Sayre, Albert H. Smyth, and John M. Miller, and in 1887, William A. Mason, were elected to the Faculty. As it is not the purpose of this history to discuss in detail the work of those who are still in the service of the school, and as Appendix B gives a sketch of each of the members of the teaching force, anything beyond a mention of the fact of election will not be necessary.

In January, 1888, Samuel B. Huey, Esq., was appointed chairman of the High School Committee. He was the first Alumnus of the school to be commissioned to preside over its welfare. With a loyal devotion to public education, and with a profound enthusiasm for the school of his youth, Mr. Huey reached the conclusion that in teaching methods and equipment the institution was behind the times, and reorganization was necessary. The time was ripe for such a movement. The celebration of the semi-centennial, in October, 1888, had given increased vitality to the Associated Alumni, and for the first time in many years the friends of the school found rallying to their support a compact body of influential citizens who were determined that the Central High School of Philadelphia should become the best in the land.

The first step was the election of a principal, and after a long and searching inquiry, in which the aid of many experienced educators was enlisted, Henry Clark Johnson, A.M., LL.D., was elected to that responsible position. Professor Johnson was then in his thirty-seventh

ZEPHANIAH HOPPER

Acting President, 1887–1888, 1894.

year, and was already prominent in the university world. He had studied at Yale and Cornell Universities and at Hamilton College. He had served a successful apprenticeship as a head-master of private schools and as a principal of the public schools of a small city. Prior to his election to the Central High School he had been for seven years Professor of the Latin Language and Literature at Lehigh University. Cultured and scholarly in his bearing, with a charm of manner that won for him instant popularity with the students, his administration opened under the most favorable auspices. Within ten days of the celebration of the semi-centennial, when all were in the first glow of hope for the future of the school, on November 8, 1888, President Johnson was inaugurated with fitting ceremonies, in which Edward T. Steel, President of the Board of Education, Samuel B. Huey, Esq., Professor Hopper, Dr. James MacAlister, Superintendent of Schools, as well as the new President, participated.

During the first five years of this sixth administration the school did not grow in public confidence as rapidly as had been hoped. Several years of continuous agitation ensued before an appropriation for new buildings could be secured. Within the school there were many changes, and there was not unanimity in commending their wisdom. Two great steps in the line of progress were taken, and these are the most noteworthy advances of this administration. In 1889 the old course of study was abandoned and an improved curriculum introduced. Again, in the same year, a subordinate grade in the teaching force was established, and to these instructorships younger men were elected, fresh from the universities.

There had been dissatisfaction with the old course of study for several years, and as soon as President Taylor was elected, the Faculty had appointed a committee to draft a new plan. But when a project had been formulated, the professors divided into two camps, with the "majority" and "minority" reports for their respective platforms. The line of cleavage was distinctly drawn. The minority contended that four-fifths of the students did not enter professional life, hence the curriculum should be broad and practical, with stress on the scientific and mathematical studies. The majority contended that there was scarcely sufficient linguistic study in the school to enable its graduates to enter upon the arts course of a modern university, and hence insisted upon emphasizing the classical studies. No conclusion was reached at this time, as the prospect of a new executive forced both camps into a courteous neutrality.

Within a few months after President Johnson's inauguration he prepared a new course of study which was the most elaborate ever introduced into the school. Being the product of but one mind, it possessed an advantage in consistency such as cannot be found in compromise curricula. Five courses were provided, open to the election of the student, each containing a core of English, Mathematics, and Science. The distinctive features of the courses were as follows: (1) *Classical,* included Latin, Greek, and either French or German. (2) *Regular,* included Latin, French, and German. (3) *Chemical,* similar to the Regular, but with additional work in Chemistry. (4) *Physical,* similar to the Regular, but with additional work in Physics and Mathematics. (5) *Scientific,* included French and German and special work in Mathe-

HENRY CLARK JOHNSON
President, 1888–1893

matics. Under this course of study the advance was pronounced. Greek and French were once more introduced, and the teaching of the languages was carried far enough to make it of some practical value. But, above all, this principle was recognized, that all students are not constituted alike in their mental machinery, and by introducing electives each was enabled to follow the line of his greatest interest.

For several years it had been apparent that the public school system would be strengthened if the number of male teachers in the upper grammar grades could be increased. It will be remembered that one of the original purposes for which the Central High School had been established was to prepare young men for teaching, and gradually a rule had been developed whereby those of the graduates of the school who obtained high standing were given teachers' certificates.* But with broader ideals there came a strong demand for direct professional training, such as the girls would receive in the new Normal School which was then being planned. Recognizing the force of this tendency, the Board of Public Education, under the leadership of Isaac A. Sheppard and Samuel B. Huey, authorized the establishment of a Graduate Course in Pedagogy in the High School, and reserved certain positions in boys' grammar schools for its students. A course of study was prepared by Dr. Edward Brooks, who became Superintendent of Schools in 1891, and the school was formally opened on October 5 of that year.

* Certificates of qualification to teach were granted to five hundred and ten graduates between 1875 and 1891. These were awarded to those students who made a general average of at least 85 on the final examination.

Its Faculty consisted of selected members of the High School Faculty, and its first students were six graduates of the High School and one graduate of Dickinson College. As a result of this new course the teachership in Philadelphia has been materially strengthened by the infusion of a group of capable and energetic men who know the city and its educational life intimately and whose pedagogic work is an ample justification for the existence of the school to which they owe their professional training.*

The instructing corps was increased by ten during this administration of five years, and while some of the new appointees lacked teaching experience, in general they brought to their work scholarly enthusiasm together with a thorough mastery of the field in which each was chosen to work. In 1889, Benjamin F. Lacey and Samuel E. Berger were elected; in 1890, Chester N. Farr, Jr., Dr. Charles S. Dolley, and Bernard Maurice; in 1891, Ellis A. Schnable; in 1892, Dr. Harry F. Keller; in 1893, William F. Gray, Ernest Lacy, and Howard W. Dubois. It is noteworthy that a majority of these were not Alumni of the High School.

The student life from 1888 to 1893 was generally progressive. *The Mirror* was published by the successive Senior Classes and the athletic teams were well sup-

* In *The School of Pedagogy Record* for March, 1901, Mr. Louis Nusbaum gives a list of the graduates of the school, with an account of their vocations. Of the total of seventy-nine graduates, ten are now supervising principals in the schools of Philadelphia, five are principals, thirty-nine are assistant teachers, and seven are engaged in the practice of other professions, or are studying at colleges or universities. No better argument for the existence of the school can be urged.

ported. Numerous literary and social societies flourished, and if they were not permanent, they were at least helpful to those who maintained them. Each year was marked by pleasant events, such as the Annual Track Games, the Christmas Entertainment (a custom of over thirty years' standing), and the Senior Entertainment, which was the boys' device for raising funds to devote to the Commencement expenses.

On October 21, 1892, Columbus Day was fittingly celebrated in the old Lecture-Room. President Johnson read the proclamation of the President of the United States and addresses were made by Professors Houston and Smyth and by several students. It is recorded that after the students were dismissed they paraded down town, shouting, " We want a new High School!" The interest which this cry aroused, and perhaps the parading fever which a national political campaign brings with it, led to an unusual demonstration on the evening of November 26, when the students of the Central High School and the two Manual Training Schools held a mammoth parade to celebrate the " burying of the hatchet" by the high schools of Philadelphia. Its marshals were William H. Ukers (Central High School), Joseph McClellan (Central Manual Training School), and George Muhley (Northeast Manual Training School), and again they raised the boyish slogan, " We want a new High School!" Indeed, the Class of '93 seems to have been unusually enterprising, for in April of their senior year its members gave a Class dance, the first of its kind, and after graduation they published a *Class Record*. There were many signs that the students were developing an initiative that augured well for the future.

The High School prepared a special exhibit of its work for the World's Columbian Exposition in 1893, largely through the efforts of Dr. Houston, and received a bronze medal and diploma for "General Excellence for the Exhibit of Pupils' work in Composition, Physical Geography, History, Constructional Drawing, and Designs." This honorable distinction was specially gratifying because of the great difficulty in representing graphically the work of the High School. The widened outlook that comes with culture and the increase of power resulting from mental discipline cannot be shown to the eye; hence to the superficial observer the High School has sometimes suffered in comparison with other institutions, in which material results, as well as mental benefits, may be effected.

In December, 1893, President Johnson resigned his responsible position, and left Philadelphia for his home at Cortland, New York. For a second time the conduct of the school was committed to Professor Hopper, who served as acting President until the following February. At first there was a general thought that the best interests of public education required that the Presidency should be conferred upon one of the members of the Faculty, who from daily experience might be expected to understand the problems of the school. But after mature deliberation the High School Committee decided to go outside of the Faculty, and eventually agreed upon Robert Ellis Thompson for the post which was admitted to be greater in its possibilities and more important in its responsibilities than any other in the educational life of the city.

The new President was no stranger to public life in

ROBERT ELLIS THOMPSON
President from 1894

Philadelphia. For twenty-four years he had held one of the most important chairs at the University of Pennsylvania, and had won a national reputation by his work in sociology and political economy. His pronounced advocacy of protection as a national policy, together with his ability as a lecturer and controversialist, had brought to him invitations to lecture at Harvard, Yale, Cornell, Princeton, and other institutions of the first grade, and his writings in this chosen field, as well as upon certain phases of social and industrial history, had served to introduce him most favorably to the reading public. At the time of his election to the Presidency of the Central High School he was just ending his fiftieth year, and hence his election was greeted with much approval by friends of the school, who hailed with great satisfaction a chief who was tried and experienced and whose personal character attested his fitness to serve as the counsellor and guide of the young men of the city.

On February 26, 1894, the new President was inaugurated with appropriate ceremonies. In the presence of the members of the Board of Education and other eminent citizens, Mr. Huey introduced Dr. Thompson as "a ripe scholar, an experienced teacher, and a pure and upright man." The inaugural address was followed with great interest, since it was felt that upon this occasion some announcement might be made of whatever changes were in contemplation. Without touching upon any specific plans, however, Dr. Thompson described what he felt to be the chief educational need of Philadelphia. "The studies called 'practical' need no special advocates in Philadelphia. The spirit of the city, which this school is not intended to antagonize, will always secure them a

fair chance. But a grave real want of Philadelphia is a wider diffusion of sound literary taste and a more careful development of literary faculty in those of the rising generation who possess it."

During the seven years that have been accomplished of this last administration several changes of organization and method have been made, and, to the great satisfaction of all thinking people, there has been an expansion of interest in higher education that has affected all classes and all localities. One of the first recommendations of the new President was that the Faculty should be organized into departments, each with a responsible head, to whom the details of supervision and oversight could be committed. In the previous year the Department of English Language and Literature had been established, and all of the work along this line had been placed in the general charge of Professor Smyth. In extending this policy there have been created the Departments of Ancient and Modern Languages, Mathematics, History, Physical Science, and Biology, and later of Art, Commerce, and Pedagogy,—these nine constituting the complete educational organization of the school. The departmental system had become a necessity in an institution in which there might be several instructors teaching the same subject to different sections of one class, and it has not only secured competent supervision through experts, but it has also aided in harmonizing and unifying the teaching.

It was well that the departments were organized at once, for the school was already in the midst of a tremendous wave of expansion that was unequalled in its previous history. In 1893 its enrollment was eight hundred and seven students; but in 1900 it had reached a total of

fourteen hundred and fifty-six, and at the opening of the term in September, 1901, when the attendance reached high-water mark, there were on the rolls the names of sixteen hundred and one students. This splendid advance has necessitated a great increase in the number of teachers, and the instructing corps, which numbered twenty-four in 1893, had increased to fifty-five in 1900. It is probable that the historian of the future, in estimating the influence of this administration, will rank among its first achievements that the President, in hearty general co-operation with the Board of Public Education, maintained a high standard of university qualification in determining who were fitted to teach in the Central High School. The additions to the list of instructors and professors are as follows: in 1894, Thomas M. Lightfoot, Henry H. Belknap, Philip Maas, J. Duncan Spaeth, J. Harry Graham, and Julius L. Neufeld; in 1895, Franklin S. Edmonds (February), Arthur W. Howes (September), Francis B. Brandt, Jonathan T. Rorer, Jr., Cheesman A. Herrick, and J. Allen Heany; in 1896, William J. Long, Jesse Pawling, Jr., John S. Morris, Lewis R. Harley, and James M. Hill; in 1897, Benjamin W. Mitchell, George L. Plitt, Harry B. McIntire, Percy L. Neel, George W. Schwartz, and Thomas R. Galbraith; in 1898, Alfred Z. Reed, Edward H. Landis, and William Weinrich, Jr.; in 1899, Edwin Leibfreed and J. Charles Walker; in 1900, David J. Campbell, Joseph Faltermayer, Louis Nusbaum, Joseph C. Fox, James H. F. Moffatt, Francis H. Lee, John L. Haney, Henry W. Patten, Emile Walliser, and Robert M. Brookfield; and in 1901, William H. Haussmann. Of these thirty-nine men, a bare majority (twenty-one) were graduates of the

High School, and of this group nearly all had pursued advanced studies at some other institution. This infusion of young blood has not only invigorated the school, but it is also a hopeful sign for the public educational system that it is able to command the services of those who rank among the best that the colleges and universities can produce.

Several changes have been made in the arrangement of the studies, and the curriculum has been greatly elaborated. Latin has again become a compulsory study in all of the courses. The student who enters the High School to-day is offered at the outset a choice between two courses,—Regular and Commercial. If he elects the former, at the end of his freshman year he is given a further choice between Greek (Classical Course) and German (Scientific). If he registers with the Scientific, at the end of the sophomore year he must elect between the Latin Scientific Course (Latin and German) and the Modern Language Scientific Course (German and French). In the later years there are other opportunities for election, the student being asked to select between two studies that are regarded as educationally equivalent. The wide scope of the electives has added greatly to the strength of the course, in that it affords an opportunity to the student to follow the line of his own chief interest, and thus strengthen himself in what may become his life-work. Perhaps the chief criticism to be made upon the general course of study is that in enriching the curriculum through the introduction of new branches the number of studies for the later years has been increased beyond the limits which modern education has come to accept. But with the readjustment that is continually

taking place a proper apportionment will doubtless be attained.

Perhaps the most interesting novelty in the course of study was introduced in 1898, when the Department of Commerce was instituted. For several years a number of influential public men of the city had been urging upon the educational authorities the necessity of providing a school in which definite preparation for business life could be obtained. At first a Commercial School was proposed, but as the plans for the expansion of the Central High School neared realization it was suggested that the studies proposed could readily be introduced as a separate course in the school which was already established. Early in 1898 the Board of Education approved of the plan, and a course of study was prepared by Superintendent Brooks, aided by other educational experts. A member of the High School Faculty whose interests and training naturally led him to this work (Professor Herrick) was appointed head of the department, and under his direction the course has been pursued with distinct success. Its first students will be graduated in 1902, and not until they have tested their training in practical life can its results be adequately estimated. But the popularity of the course and the interest which the students have taken in their work are excellent indications that by this means many have been led to do higher work who would not have found the training they desired in any other course.

The Alumni of the school have heartily endorsed this new feature of the curriculum, and many of those who were graduated in the fifties have found in it a justification for the ideals which President Hart had cherished. It is to be hoped that so long as the High School exists

there may be found among its pupils those preparing for business studying side by side with those who plan for professional life, each group deriving help from its association with the other. It would be a distinct narrowing of the function of the school if either group were to be removed from direct contact with the other.

Another important educational change came in 1896, when the course in Pedagogy was extended to two years and a special professorship in that subject was created. Since that time the School of Pedagogy has been a regular department of the High School, under the direction of Professor Brandt, and, with the establishment of a School of Practice for the pedagogical students in 1900, the way has been opened for even greater usefulness for this post-graduate course.

The student life during this last period has been characterized by a general improvement in tone and by a striking elaboration of interests. In methods of discipline there has been a complete change,—the system of "noting" having been abolished and in its place a "Committee of Discipline" instituted. This august body holds regular meetings, directs inquiries, and apportions penalties. It still asserts the old tradition, that no offender can be punished until he has had ample opportunity to state his case, and thus justice is insured.

The introduction of military drill has frequently been suggested as a method whereby habits of subordination would be encouraged, and also as a salutary physical exercise. It is probable that a regular drill would be immensely popular with the students, who have formed volunteer companies with great enthusiasm when the opportunity was presented. But usually anything that

would tend to arouse a martial spirit has met with the opposition of the Society of Friends, and thus far this has proved effectual.

Student societies have been founded in great numbers, have flourished with temporary prosperity, and then died. No undergraduate organization has had a continuous life in these later years, except the Athletic Association. Certain of these multiform societies have had their origin in some phase of the school work, as the Mathematical Seminar, Chaucer Club, German Society, Agassiz Association, Field Club, and House of Representatives. Others have been purely social in their purposes, and were distinguished by their unique appellations. Thus, in the Class of 1901 there were the following clubs, Le Bon Ton, Joyful Jabberwocks, Robin Hood, The Stags, The Rounders, The Knickerbocker Club, Saccaria Sodalitas, etc.

The class activities have developed to an unusual degree. Since 1893 each graduating class has published an annual, called the *Class Record*. In the next year the custom of holding a Class Day as a feature of the Commencement Week was instituted, and has since continued. In 1894 the pleasing institution of a baccalaureate sermon deserves notice, the sermons having been preached by Rev. Dr. Charles Wadsworth (1894), Rt. Rev. Leighton Coleman (1895), Rev. Dr. Wallace MacMullen (1896), Rev. Dr. Kerr Boyce Tupper (1897), Rev. Dr. Joseph D. Newlin (1898), and since then by the President of the school.

The Senior Entertainment, which was originally designed to meet the expenses of graduation, has now developed into one of the most elaborate functions of the

year. Once a permanent dramatic club was started, but as its demands upon the time and energies of the students were severe, it did not meet with the approval of the Faculty. Some of the recent classes have arranged a school dance, — the Senior Promenade, — which has proved to be an exceedingly pleasant function. Recently, through the efforts of the Alumni, oratorical contests have again been instituted, and these have brought together the students and their friends in a most pleasant way. So to-day the annual programme of the alert High School boy includes football, base-ball, basket-ball, and cricket games, the interscholastic regatta, the track meets, the Senior Entertainment, the Senior and Junior oratorical contests, the baccalaureate sermon, Class Day, and Commencement; and as this will be interspersed with regular meetings of his own club, it can readily be seen that he suffers no lack of opportunities to meet his fellows. Indeed, those who owe allegiance to an older set of traditions may perhaps deplore the stress which is laid upon social life among the youth of the city to-day and decry what seems to them to be a degeneration from the more sober ideals of their own boyhood. That there is reason in this attitude is not to be doubted, but it is well to remember that the High School is not alone in this development, and that its history illustrates the great change that has come over social standards in the last two decades favoring greater freedom for the young.

Certain incidents of the school life that have occurred recently deserve mention. On May 15, 1897, the students took part in the bicycle parade that formed part of the ceremonies at the unveiling of the Washington Monument at the Green Street entrance to Fairmount

Park. When school reopened in the autumn there was an interesting historical occasion when, on September 20, 1897, there was celebrated the sixtieth anniversary of the laying of the corner-stone of the first High School building. Professor Hopper made an address to the students that had much to do with reawakening an interest in the past. On November 29, 1897, Mrs. William T. Carter, member of the National Society of the American Institute of Civics, presented a large American flag to the school, the chief address being made by Major-General Nelson A. Miles, commanding the army of the United States. The Spanish War of 1898 brought about a great outburst of patriotism, not unlike that of 1861. The Faculty and High School Committee at once resolved to graduate with his class any senior who should enlist in the service of his country, and several took advantage of this permission. The younger students were deeply concerned at an undeserved stigma cast upon them by their rivals in other institutions because the school colors (crimson and gold) corresponded to the colors of Spain. Not until the Athletic Council directed that wherever the crimson and gold were displayed the red, white, and blue should accompany them was this complication satisfactorily settled.

In the midst of these healthy and vigorous interests the school was growing with such rapidity that it seemed destined to absorb the whole neighborhood. At various times there were pressed into service the church at Broad and Brandywine Streets, a dwelling-house at Fifteenth and Green Streets, two rooms of the house 1204 Spring Garden Street, and the famous "annex," as the carriage-factory at Broad and Mount Vernon Streets was called.

At one time more than one-half of the students could not be accommodated in the school building, and their teaching was conducted in the unsatisfactory environment of temporary quarters. It is now seven years since the whole school has seen itself, since the entire student body has assembled at one time in one place. Eventually the school was divided into two squads, the first reporting from 9 A.M. to 1 P.M. and the second from 1 P.M. to 5 P.M. In 1896 a large portion of the Freshman Class was assigned to afternoon sessions, but through the generosity of Mr. Alexander Adaire, a member of the High School Committee, additional rooms were provided in the annex. In 1897-98 the Junior Class, and from 1898 to 1900 the Freshman Class, held afternoon sessions; and added to the hardship which this entailed was the daily view of the tantalizing progress made on the magnificent granite block situated on the opposite corner.

The fight for the new buildings was the most important of the recent struggles and the greatest of the victories. For many years it had been felt that the old building was absolutely inadequate to the demand. Public opinion would no longer tolerate that young men, competent and ambitious, should be shut out from the school merely because there was no room. It was a long, hard battle, but with each discouragement the demands grew in definiteness and in size, until to-day the school is housed in part of what has been termed the most complete, as it is the most costly, school-house in America. It is interesting to notice how the popular conception of the needs of the school was enlarged. In 1887 the Board of Public Education asked Councils for $30,000 to extend the old building, and was refused; in 1890 it asked for $150,000

THE NEW BUILDINGS, FROM 1900

for an addition to the building, with a like result; but three years later it was granted $500,000 as the first appropriation for a new building; and since then, although there have been delays due to lawsuits, strikes, etc., progress has been made until completion is within view.* That so much has been obtained for the school

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* These facts concerning the new buildings have been carefully verified and may be of general interest:

DIMENSIONS.

Size of lot, 186 feet 5 inches on Broad and Fifteenth Streets, and 395 feet 6 inches on Green and Brandywine Streets.

Main building, 170 by 221 feet 11 inches.

Annex, 86 by 150 feet.

Height of tower, 137 feet.

Height of roof, 92 feet.

Height of ceilings: basement, 11 feet; first floor, 16 feet; second and third floors, 15 feet; and fourth floor, 13 feet.

Assembly-room, 144 by 80 feet.

Height of gymnasium, 40 feet.

Distance between main building and annex, 58 feet 3 inches.

Alumni library, 80 by 64 feet 6 inches.

COST.

Lot	$400,000.00
Principal contract on main building	593,137.50
Extra granite trimmings	30,000.00
Special fireproofing	36,766.00
Heat and ventilating plant	39,350.00
Electrical and mechanical plant	26,780.00
Laboratory table, cases, etc.	28,700.00
Telescope and fittings	25,000.00
Transit-room	4,947.00
Electric wiring	9,319.00
Paving	6,853.00
Outside window-gratings	3,985.00
Addition to tower, etc.	1,925.00
Iron rails and girders	3,950.00
Chairs for students	8,228.70
Other furniture (about)	30,000.00

is due, beyond all other reasons, to the zeal and energy with which the Alumni pressed its claims upon a public at first indifferent but soon highly interested. The chairman of the High School Committee and a majority of his colleagues were Alumni; in Councils the first interest was shown by former students of the school, such as Edward W. Patton, James L. Miles, Jacob J. Seeds, William H. James, and Edward A. Anderson. The Alumni in public life united to commend the plan, and as a result of this earnest work the appropriations were secured. This is the first building erected for the school by the city of Philadelphia, for the Juniper Street school was built with a grant from the national treasury and the second building largely from the proceeds of the sale of the first.

In the course of the struggle for better quarters certain interesting developments took place. As soon as the semi-centennial exercises had taken place, in 1888, it was suggested that the enthusiasm and loyalty then asserted should be directed into some channel whereby the school could be aided. The first opportunity came in December, 1891, when the Associated Alumni tendered a reception to Dr. Edward Brooks, the newly elected Superintendent of Schools. On this occasion the addresses were all along one line,—the needs of the High School. Within a few months the following committee was appointed to co-

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COST OF ANNEX.

Original contract, less penalty	$122,084.00
Extra piers	1,478.36
Final contract	157,293.00
Paving (estimated)	4,000.00
Total cost of site and buildings	$1,533,796.56

operate with the High School Committee in all of its plans for advancing the interests of the school: John R. Fanshawe, John F. Lewis, Esq., Professor Edwin J. Houston, Harry Shelmire Hopper, Esq., General James W. Latta, Jacob Singer, Esq., and George Barclay Hawkes, Esq. The newspapers of the city were much interested in the agitation, and by articles and editorials showed the need of better accommodations for the school. When the appropriation was pending before the Finance Committee, Mr. Huey, Dr. Houston, Mr. Singer, and Mr. David H. Lane, all members of the Alumni, offered arguments in its favor. A few days later, at the Annual Reception of the Alumni, William H. Staake, Esq., offered a strong resolution endorsing the action of the Finance Committee in allowing the appropriation.

In the first months of 1893 an examination of available sites was pursued. The lot at Twenty-sixth and Jefferson Streets and those at Broad and Spring Garden Streets and at Broad and Cherry Streets were strongly advocated, but by April all had united in the selection of the site at the southwest corner of Broad and Green Streets, which was held to be doubly desirable from its central location on the main avenue of the city and by reason of its proximity to the spot around which the traditions of the school centred.

The purchase of this site was involved in costly litigation, and it was not until May 7, 1894, that the ground was broken. The first sod was upturned by Mr. Fanshawe, who had been accorded this honor by the chairman of the Property Committee of the Board of Education, Mr. Paul Kavanagh, in recognition of the work of

the Alumni in securing the appropriation for the new school.*

On October 20, 1894, the corner-stone was laid in an impressive manner, with the members of the Board of Public Education, Alumni, Faculty, and students, as well as many other distinguished citizens, as witnesses. There were religious exercises conducted by Rev. Dr. Stephen W. Dana and Rev. Dr. William N. McVickar; addresses were made by Mr. Kavanagh, Mr. Huey, Hon. Robert E. Pattison, Dr. Robert Ellis Thompson, Professor Houston, Dr. Brooks, and Mr. James L. Miles; and the corner-stone, containing many precious mementos, was laid by Mr. Isaac A. Sheppard, President of the Board of Public Education.

In the years of waiting that followed the progress of the building was delayed in a number of ways that could not have been anticipated at the outset. In the mean time the school expanded so rapidly that at one time annexes, double sessions, abbreviated curriculum, and all sorts of devices became necessary, if those who desired a high school education were not to be refused. At last, in September, 1900, the main building having been finished, the school entered its new quarters with the best wishes of the entire community for the maintenance of the traditions of high usefulness that had been so well asserted in the past.†

During these later years, when it has seemed that at

* The spade used on this occasion, the first sod upturned, as well as the trowel employed at the laying of the corner-stone, form interesting relics in the archives of the Associated Alumni.

† It is probable that the annex will be completed early in 1902, and it is expected that the formal opening will be held at that time.

last a proper environment for the students was possible, many plans have been suggested for increasing the efficiency of the school. Beyond all question the most important contemplated the expansion of the course of study. At first a change of name to "The College of Philadelphia" was advocated, but later opinion in the Board of Public Education was crystallized in favor of a more fundamental proposition,—that two years should be added to the course of study. The argument for this change was first presented in the annual report of Mr. Samuel B. Huey, President of the Board, for 1898, and it was at once endorsed by the High School Committee, the Faculty, the Superintendent of Schools, and the Board of Managers of the Associated Alumni. So marked an expansion proved, however, to be in advance of public opinion, and hence decisive action in the matter was postponed.

If the school is to maintain its position as the "People's College," established for the full general education of the young men of the city and conferring the bachelor's degree upon its graduates, it cannot be questioned that some advance in its scholastic standards is necessary. In the days of President Hart this was brought about by increasing the entrance requirements, thus passing the elementary studies to the lower schools. If this could be done with the preliminary work in the foreign languages, it would probably be of great benefit to the schools below as well as to the schools above. With an increasing interest in higher education, standards are continually advancing, and no one will deny that to be considered cultured by the tests of 1901 a man must know many things that two generations ago formed no part

of a general education. If the High School is to continue to send forth students who will enter directly into professional schools for the study of law, medicine, and theology, if its graduates are to enter into the active work of trade and commerce, in which they will find competition keen and direct with the alumni of the modern colleges and universities, then some rearrangement of studies is inevitable that will advance the grade of maturity and of knowledge with which the students of the High School leave their Alma Mater.

Certainly all will agree that the pupils of the public schools are entitled to the best and most complete education that modern standards can prescribe.*

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* The following statistics represent the tendencies of the recent graduating classes. For five years past, during the Commencement Week, the members of the Graduating Class have been asked to indicate what line they expected to follow the next year. From their replies this table has been compiled. It has been impossible to verify all of these expectations, but it is believed that the table represents a fairly accurate approximation of the lines of work pursued by the recent High School graduates.

	Class of				
	1897.	1898.	1899.	1900.	1901.
School of Pedagogy.....	10	10	7	7	7
University of Pennsylvania:					
Arts	3	10	10	13	9
Wharton School.....	3	..	8	3	2
Biology	3	..	2	..	1
Chemistry	2	3	..	8	1
Engineering	2	3	1	6	6
Architecture	..	2	5	2	..
Law	11	13	15	11	10
Medicine	5	11	7	11	8
Dentistry	1	1	..	1	..
Department undecided	1	3	1	1	1

	Class of				
	1897.	1898.	1899.	1900.	1901.
Yale	1	..	..	..	3
Harvard	1	4	2	2	1
Princeton	1	1	2	2	..
Johns Hopkins	1	1	..	..	..
Cornell	..	2	..	..	1
Columbia	..	..	..	1	..
Lehigh	..	..	4	5	5
Lafayette	..	1	..	1	..
Franklin and Marshall	..	..	..	..	1
Dickinson	..	..	..	..	5
Haverford	2	..	..	..	1
Oberlin	..	..	..	..	1
Bucknell	..	..	..	1	..
Jefferson Medical	..	..	2	6	4
Medico-Chirurgical	..	..	..	..	1
Hahnemann Medical	3	4	2	..	..
College of Pharmacy	1	1	1	..	1
United States Naval Academy	..	1	..	1	1
Michigan Mining School	..	1	..	..	..
Crozer Theological Seminary	..	..	1	..	..
New York Theological Seminary	..	..	..	1	..
School of Industrial Art	..	1	..	1	..
Academy of Fine Arts	..	1	..	..	..
College undecided	..	..	1	2	1
United States Military Academy	..	1	..	..	..
Number who expect to pursue college or university work	51	75	71	86	71
Number who expect to enter business	56	24	79	40	41

It will be noticed that for the large majority of its graduates the High School concludes the period of general or cultural training, and that the proportion that pursues an arts course after graduation is exceedingly small.

CHAPTER XIV

THE ALUMNI

From the graduation of the First Class to the present the Alumni of the Central High School have been noted for the strength of their devotion to Alma Mater and of their fraternal feeling for one another. As a large proportion of the members of each class have remained in Philadelphia, it has been possible to collect the records of the careers of many, and so to form some conception, though it must necessarily be inadequate, of the influence of the school upon the community which has maintained it. Year after year young men have been sent forth to take part in the battle of life; they have scattered along many lines and have engaged in diverse works, but their loyalty to the old school which gave them their training has been honest and unfaltering. No better testimony to the efficiency of public higher education can be given than that which comes from those who have tested its work in practical life.

Several associations of the Alumni have been formed, but a half-century had almost elapsed before an enduring basis was laid for such an organization as now exists. Immediately after the exercises of the first Commencement, July 15, 1842, Dr. Bache invited the graduates to form an Alumni Association, and for several years this society continued. Its chief function was an annual meeting, at which honorary addresses were de-

livered. It is recorded that in 1848 an Alumni dinner was held, which was attended by a large proportion of the graduates of the early classes. In later years interest in the association languished, and it seems to have been buried and revived several times. In 1855, and again in 1862, editions of a general Alumni catalogue were published, containing the names of all students admitted to the school. It was originally intended to issue this catalogue at regular intervals of three or five years, but this plan was not realized. In 1867 a collateral organization was formed, which, under the name "The Alumni Institute of the Central High School," was designed to aid in the social life of the main association. In 1873 the present association was incorporated, under a charter from the State of Pennsylvania, with the title "The Associated Alumni of the Central High School of Philadelphia." For several years after incorporation the Alumni reunions were well conducted and supported; but in 1886, with the approach of the semi-centennial, it was determined to reorganize, with a view to greater efficiency. The first public functions under the direction of the Associated Alumni were the exercises in commemoration of the semi-centennial of the school, held at the Academy of Music on October 29, 1888. Extraordinary efforts had been put forth to arouse an appropriate enthusiasm. Six months before the anniversary a committee had been appointed from each of the ninety-six classes of the school's history. The Executive Committee in direct charge of details consisted of John F. Lewis, Esq., chairman; Harry Shelmire Hopper, Esq., secretary; Col. Robert P. Dechert, Professor Edwin J. Houston, John J. Weaver, Stephen W. White, and John

Thompson Elliot. An anniversary fund was collected, and, as an Alumni Memorial, a library was established for the use of the students of the school.

The meeting at the Academy of Music was remarkable for the interest manifested by some of the ablest and most progressive citizens of Philadelphia. Col. R. P. Dechert presided, and the programme included devotional exercises by two Alumni, Rev. Dr. John E. Cookman and Rev. Dr. Samuel Laird, and addresses by the chairman; by Hon. Michael Arnold, who spoke on "The Administration of Professor John S. Hart;" by Dr. S. Solis Cohen, whose topic was "The Central High School as a Teacher of Science;" by Hon. William N. Ashman, who considered "The Value of the Central High School in its Relation to our Public Schools;" and by George Alfred Townsend, who recited an original poem. The second part of the programme was opened by Col. Charles H. Banes with an address upon "The High School during the War;" Mr. William M. Smith, President of Common Council, was expected to speak, but was detained by sickness, and letters from Mr. Smith and several other Alumni were read by William H. Staake, Esq. Hon. Lewis C. Cassidy was also prevented from attendance by sickness, and in his place the chairman of the Semi-Centennial Committee, John F. Lewis, Esq., who had worked with such devotion for the success of the meeting, delivered an address upon "The Work of the High School." The concluding address was by Hon. Robert E. Pattison, whose topic was "The Duty of the State to furnish Gratuitous Higher Education."

The celebration at the Academy of Music was followed, on the evening of October 30, 1888, by the Semi-Centen-

nial Reception, at St. George's Hall, which was largely attended by Alumni, members of the Faculty, city and State officials, and invited guests connected with educational work. This reception was the means of bringing together more Alumni and friends of the school than had ever met in a similar manner before; and the enthusiasm resulting from this social gathering has affected materially the subsequent history of the school.

There can be no doubt as to the effect of these meetings in directing public attention to the work and the needs of the High School. Those in charge of the reunion had requested the Alumni to wear on that day the colors of the school, crimson and gold, and the result far exceeded expectations. This enthusiasm was increased by the publications which were issued by the Alumni. Professor George Howard Cliff was invited to prepare a history of the Central High School, and this admirable sketch, which was printed in the same volume with the addresses at the Academy meeting, was given wide circulation.

As a part of the work of the semi-centennial, another interesting project was carried out. By order of the Board of Public Education, a new edition of the general catalogue was prepared and edited by Harry Shelmire Hopper. The catalogue included lists of all officials, members of the Faculty, and all students of the school during the first fifty years of its existence. The roll covered one hundred and ninety pages and included over twelve thousand names. As a result of this historical work the school and its Alumni were accorded a public respect unique in the history of Philadelphia. The experimental stage was passed.

Since 1888 the Associated Alumni has held an annual

reception, which has become one of the eagerly awaited functions of the social year. It has taken part in the struggle for the new school buildings, and by appeal and agitation it has aided the High School Committee in all plans for the advancement of the school. It has collected records of the school and of the individual Alumni, and has striven to keep the Alumni in touch with one another by published reports. It has established a prize fund, and has encouraged graduates to establish prizes for the competition of the students each year.* The Alumni awards at Commencement a prize to the first honor, junior and senior oratorical prizes, historical, literary, scientific, and municipal government essay prizes, and an athletic scholarship prize. In the daily life of the school the Associated Alumni has rendered efficient service in the development of athletics. The Board of Managers is represented on the Athletic Council, and liberal aid and helpful suggestions have been given in all of the movements in the direction of expansion.

Perhaps the most potent service rendered recently by the Associated Alumni is to be found in the watchful guard that it has maintained over the school's interests. For several years there has been a Committee on Legislation for the purpose of aiding in the furtherance of all measures that will benefit higher public education. The Alumni were heartily in favor of the expansion of the course of study, and have urged this development with great enthusiasm. When the city authorities were con-

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* Among the Alumni who have offered prizes may be mentioned Alexander Simpson, Jr., Esq., Dr. Louis J. Lautenbach, Clinton Rogers Woodruff, Esq., and Mr. Charles Bowden.

sidering the establishment of paid scholarships in the University of Pennsylvania, the Alumni pointed out that if the greatest benefit was to inure to the higher schools, these scholarships must not be restricted to any department or course, and this view ultimately prevailed. As the Associated Alumni has maintained an active membership of about twelve hundred, and as a large proportion of these are among the most influential citizens of Philadelphia, its possibilities for influencing public opinion are practically unlimited, especially since its plea is for the better development of the city's facilities for public higher education.

There can be no better conclusion to the history of the school than by referring to the work of its students. In the early years, when the usefulness of a public high school was a matter of grave doubt, the conclusive argument was the work accomplished by its graduates. On February 9, 1856, on the floor of Common Council, Mr. Knorr defended the High School by describing what it had accomplished. He had made inquiries concerning the first one hundred of its graduates, and his conclusion was, that in less than fourteen years more than sixty had distinguished themselves in some department of honorable industry.

"I find that two of them are large ship-builders; one of whom, Charles H. Cramp, modelled the clipper ships 'Morning Light,' 'Manitou,' and 'Bridgewater,' which are amongst the fastest sailors that ever made the voyage to California. Two others are managers and partners in the heaviest engine foundry in the city, that of Merrick & Sons. We find the son of a poor widow of Southwark, who was for several years employed at Washington, under the United States government, in reducing the mathematical results of the Coast Survey, afterwards in command of an expedition taking soundings of the coast and rivers near San Francisco. Three others

are assistants in command of parties for the United States Survey in California; one of them, who has risen more rapidly than any other young man in the service, is the son of a Kensington weaver, and whilst at school was obliged to earn his board and clothing by working at night.

"Another, the son of a poor night watchman, is now the chief assayer of the United States Mint, at New York.

"Another, Mr. Conrad Wiegand, holds the same station in the mint at San Francisco, at a salary of three thousand dollars per annum; his predecessor in this same office, Mr. John Heuston, was also a graduate of the High School. This Mr. Heuston and another graduate are making fortunes as private assayers in San Francisco. Another is at the head of the largest mercantile house in one of our first cities, at a salary of four thousand dollars per annum.

"The entire corps of phonographic reporters that report the proceedings of the United States Senate, by authority, for *The Congressional Globe,* consists of graduates of the High School. Two of these, Dennis F. Murphy and John McElhone, are probably the most accomplished reporters living.

"Drs. Michael O'Hara and Albert L. Gihon for two successive years have ranked the highest among the crowd of physicians from all parts of the Union to be examined by a government commissioner for the post of assistant surgeons in the United States army.

"Dr. James Meigs, one of the younger graduates of the school, has lately contributed a paper on one of the most recondite points connected with crystallization, which the Academy of Natural Sciences has published in a quarto volume of its transactions.

"Robert R. Morehead fell fighting for his country at the battle of Monterey, having been the first to mount the walls, whilst another schoolmate, Samuel Godshall, fought at his side in the same breach.

"It is only thirteen and a half years since the First Class of the High School graduated. Where is the school that can show among its Alumni the same results in the same space of time?"

One of the most interesting conclusions suggested by a study of the Alumni is that the school has been truly a sound preparation for life. It has led to no one channel or path. When the Fourteenth Class held its seventh annual reunion, in 1856, it was reported that four had

entered the ministry, six had become lawyers, and others had become vice-consul at Marseilles, chief coiner of the United States Mint, city surveyor of San Francisco, editor in New York, reporter of the United States Senate, gold-miner in California, etc. It was a member of this class, Charles S. Capp, who led an educational agitation in San Francisco that resulted in the establishment of a high school and a system of night schools.

The Twenty-sixth Class, graduating July, 1855, has been exceedingly faithful in arranging reunions and in collecting the records of its members. In 1892 a class history was published, with photographs of the Hart Faculty and of the students of the class, together with biographical sketches. Among its members were the following: Capt. John P. Green, first vice-president of the Pennsylvania Railroad Company; Rev. Dr. Reese F. Alsop, of Brooklyn; Gen. Lewis H. Carpenter, U.S.A., and recently military governor of Santiago; Col. Robert L. Orr, Col. James Ashworth, and Capt. John S. Bradford, U.S.A.; Edmund D. Randolph, president of the Continental Bank of New York City; Robert Morris Early, of the Merchants' Trust Company; William Ellery C. Coxe, president of the Montour Iron and Steel Works.* A group of teachers,—Joseph W. Wilson, George W. Corliss, Frederick F. Christine, J. Morton Thomas, and Charles A. Randall; of lawyers,—Henry A. Converse, Esq., Clifford P. MacCalla, Esq., and Frank Wolfe, Esq.;

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* Mr. Coxe has recorded that his first position was obtained through answering an advertisement—"Wanted a young man to learn the iron manufacturing business,—graduate of the High School preferred."

of business-men,—William W. Justice, William Wood, Joseph P. Mumford, and George M. Sayre; Rev. Edward P. Capp, one of the early missionaries to China, and James J. Murphy, reporter of the United States Senate. Surely, any college of the land might well be proud of a band who have wrought so faithfully and well.

The Thirty-fourth Class, graduating in 1859, has been exceedingly fortunate in its historians,—Mr. Charles V. MacManus and Dr. I. Gilbert Young. While the records of individuals will be included in the general lists that follow, a summary of the careers of the members of this class is of great interest. Of the one hundred and twenty-four who composed the entire class, twenty-four served in the Civil War, of whom eleven attained rank as commissioned officers. Six studied law, of whom two are now judges in the courts of Philadelphia. Six became teachers, including two college presidents and one distinguished executive of a great university (Lehigh). Five became physicians, and five journalists. There were twenty-four merchants and manufacturers, eighteen clerks and bookkeepers, ten salesmen, two farmers, and two machinists.

Among the former students of the school who have become prominent in public life may be mentioned the following:* Hon. Charles F. Manderson (25), Senator from Nebraska; Hon. Robert E. Pattison (55), twice governor of Pennsylvania; Hon. Leon Abbett (23),

* In the lists which follow brief selections only have been made from the matriculate catalogue of the school. Some of those whose names are given did not complete the full four years' course. In each case the number of the class is given in parenthesis. In speaking of official positions, the present tense has been employed.

governor of New Jersey and State Supreme Court justice; Hon. Elwood Evans (6), lieutenant-governor of Washington and judge; Henry George (29), the father of the "Single Tax;" Dominick I. Murphy (46), United States Commissioner of Pensions; Hon. Samuel S. Fisher (18), United States Commissioner of Patents; Hon. James T. Mitchell (19), justice Supreme Court of Pennsylvania; Hon. Edward Patterson (27), justice Supreme Court of New York; Hon. Lewis C. Cassidy (10), attorney-general of Pennsylvania; Hon. Ignatius Donnelly (13), member of Congress and Populist candidate for the Vice-Presidency in 1900; Hon. James Rankin Young (48) and Hon. John V. Creely (31), members of the United States House of Representatives; Hon. George W. Caruth (34), United States minister to Portugal; Gen. James W. Latta (28), secretary of internal affairs of Pennsylvania; Cyrus Newlin, Esq. (25), United States district attorney for West Virginia; Walter McMichael, Esq. (72), assistant attorney-general of the United States; Dr. Roland P. Falkner (80), chief of Bureau of Documents, Congressional Library; Dr. Leo S. Rowe (88), member of the commission to revise the laws of Puerto Rico, etc.

In the municipal life of Philadelphia, High School Alumni have been found in almost every civic department: Gen. Robert P. Dechert (37), controller; John J. Ridgway, Jr. (40), and Wencel Hartman (38), sheriffs; Walter E. Rex (44) and Jacob Singer (69), registers of wills; Henry S. Hagert (4) and P. Frederick Rothermel, Jr. (49), district attorneys; Hon. James Lynd (5), Hon. James Gay Gordon (61), Hon. Michael Arnold (33), Hon. Abraham M. Beitler (56), Hon.

Henry J. McCarthy (41), Hon. Mayer Sulzberger (34), Hon. J. Willis Martin (64), Hon. Theodore F. Jenkins (49), judges of the Courts of Common Pleas of Philadelphia County; Hon. William B. Hanna (22), Hon. William N. Ashman (15), Hon. Joseph C. Ferguson (34), judges of the Orphans' Court; Henry R. Edmunds (32), United States commissioner; William Nelson West (29) and Henry T. King (13), city solicitors; William J. Roney (36), receiver of taxes; James L. Miles (46), president of Select Council; Henry Huhn (13) and William M. Smith (14), presidents of Common Council; John P. J. Sensenderfer (50), county commissioner; John Overn (13), chief of Bureau of Boiler Inspection; David W. Sellers (15), president of Park Commission; William R. Tucker (43), master warden of the port; Joel Cook (33), president of Board of Port Wardens; Joseph L. Caven (21) and William H. Lambert (35), of the Board of City Trusts; Charles S. Greene (9), prothonotary of the Supreme Court of Pennsylvania; Charles S. Lincoln (5), clerk of the United States District Court, etc.

In the Board of Public Education a large portion of the work has devolved upon High School Alumni. Today about one-third of the members of the Board are Alumni, including the president and vice-president, and in the executive force mention may be made of Henry W. Halliwell (20) and Andrew F. Hammond (50), secretaries, and William Dick (68), assistant secretary.

Among the literary workers of the Alumni there are Frank R. Stockton (19), the famous novelist; John A. Dorgan (13), poet; George Alfred Townsend, "Gath" (35), journalist, poet, and novelist; Rev. Dr. William

Elliott Griffis (41), missionary and historian; Joel Cook (33) and Dr. Bushrod W. James (29), authors of books of travel; Charles Leonard Moore (58) and Felix N. Gerson (77), poets; Professor Albert H. Smyth (78), Jacob Sulzberger (37), and Patterson DuBois (47), well known as essayists in the literary field; Dr. Albert Elmer Hancock (87), author of fiction; Dr. Theodore W. Koch (90), the Dante scholar; Dr. William J. Campbell (49) and James G. Barnwell (16), book-collectors, etc.

In artistic work honors have been fairly earned by the following: William Sartain (38), president of the New York Art Club; Dewey Bates (55), whose London studio caused him to be even better known abroad than at home; James B. Sword (32); William T. Richards (15), marine and landscape artist; Thomas Eakins (38), whose exhibit at the Buffalo Pan-American Exposition was honored with a gold-medal award; Albert Rosenthal (75), engraver; William C. Bispham (75), animal-painter; Louis M. (84) and William J. Glackens (90), art illustrators; John W. Louderbach (9), Frank M. Howarth (77), and Augustus Koopman (86), engravers and illustrators, etc.

In the musical world mention may be made of Septimus W. Winner (10), author of "Listen to the Mocking-Bird" and "What is Home Without a Mother?" Charles H. Jarvis (23), and J. Spencer Brock (80).

In scientific work the school has sent forth men who have become eminent in every department of human knowledge, including Dr. Charles M. Cresson (1); Professor Edwin J. Houston (43); Elihu Thomson (55); Professor J. Morgan Hart (29), Professor John B. Webb (33), and Professor Victor F. Wilson (80), all of the

faculty of Cornell University; Professor Henry D. Hubbard (88) and Professor Charles N. Zeublin (82), of the University of Chicago; Professor Albert R. Leeds (36) and Professor Charles F. Kroeh (44), of Stevens Institute; President Thomas M. Drown (35), Professor Joseph W. Richards (78), Professor John L. Stewart (86), and George E. Wendle (84), of Lehigh University; Dr. Cyrus Adler (72), of the Smithsonian Institution, Washington, D. C.; Professor Max Sommerville (14), Dr. Andrew J. Parker (61), Dr. John W. Harshberger (90), Dr. Leo S. Rowe (88), and Dr. James T. Young (96), of the University of Pennsylvania; Professor Robert W. Rodgers (78), of Drew Theological Seminary; Professor Charles E. Hart (25), of Rutgers College; Dr. B. Howard Rand (2), Dr. Henry Leffmann (46), Dr. William H. Greene (56), and Dr. William B. Beam (71), of Algiers, specialists in chemistry; in the government service,—George Davidson (6), James S. Lawson (6), Alexander M. Harrisson (9), Washington I. Vinal (44), and Dr. Albert C. Peale (52), of the United States Coast and Geodetic Survey; Andrew Mason (6), superintendent of Assay Office, New York; John Heuston (5), who established the United States Mint at San Francisco; Pedro G. Salom (62); Dr. William F. Schmoele (43), now of Belgium, inventor of an electric organ; Edwin W. Rice (76), second vice-president of the General Electric Company; John L. Ogden (41), chief of the Bureau of Water, Philadelphia; Eugene A. Smith (37), State geologist of Alabama; Dr. William H. Wahl (44), secretary of the Franklin Institute; Dr. Edward J. Nolen (43), secretary of the Academy of Natural Sciences; Professor

Joseph P. Remington (44), dean of the Philadelphia College of Pharmacy; Professor Alfred N. Seal (86), of Girard College, etc.

Among the Alumni in the professions there may be mentioned the following clergymen: Rev. Dr. Reese F. Alsop (26), now of Brooklyn; Rev. Dr. Robert C. Matlack (13), secretary of the Protestant Episcopal Evangelical Education Society; Rev. Dr. Herman L. Duhring (33), superintendent of the Protestant Episcopal City Mission; Rev. Dr. Chester D. Hartranft (27), president of the Theological Seminary, Hartford, Connecticut; Rev. Dr. William Dayton Roberts (56), of Williamsport; Rev. Dr. John E. Cookman (24); Rev. Dr. Ignatius Horstman (31), bishop of Cleveland; Rev. Dr. Henry P. Hay (30); Rev. Dr. Robert M. Luther (34); Rev. Snyder B. Simes (35); Rev. Edwin C. Griffiths (36); Rev. John K. Murphy (6); Rev. Charles C. Bitting (14); Rev. George A. Latimer (8); Rev. Dr. Samuel Laird (18); Rev. John A. Goodfellow (45); Rev. Joseph L. Miller (45); Rev. Richard Montgomery (64); Rev. William Howard Falkner (77), of Baltimore; Rev. George H. Bickley (82), etc.

In the medical world many Alumni have attained honorable distinction, among whom are the following: Dr. W. W. Keen (21), F.R.C.S. (London), president of the American Medical Association; Dr. S. B. Wylie Mitchell (14), Dr. Harrison Allen (33), and Dr. Charles K. Mills (44), of the faculty of the University of Pennsylvania; Dr. Thomas J. Turner (11), Dr. Albert C. Gorgas (19), and Dr. Albert L. Gihon (12), who were medical directors in the United States army and navy; Dr. Daniel S. Lamb (34), professor at Howard University and chief

of the United States Medical Museum; Dr. J. Bernard Brinton (23), medical purveyor, Army of Potomac; Dr. Francis X. Dercum (62) and Dr. J. Aitken Meigs (11), of Jefferson Medical College; Dr. E. A. Farrington (47), Dr. Herbert L. Northrop (85), and Dr. William Budd Trites (49), of the Hahnemann Medical College; Dr. Henry Gerhart (4), of the State Dental Board; Dr. William B. Atkinson (18), of the State Board of Health; Dr. Bushrod W. James (29); Dr. S. Solis Cohen (60); Dr. Louis J. Lautenbach (71); Dr. Charles S. Turnbull (32); Dr. Michael O'Hara (12), medical director of St. Agnes's Hospital; Dr. George H. Horn (30), secretary of the American Philosophical Society; Dr. Philip Leidy (33); Dr. W. A. N. Dorland (78); Dr. J. Solis Cohen (23); Dr. T. Hollingsworth Andrews (42); Dr. G. Oram Ring (75); Dr. Joseph P. Leidy, Jr. (82); Dr. Richard J. Dunglison (17); Dr. George H. Napheys (36); Dr. Charles A. Oliver (61); Dr. Jay F. Schamberg (92), of the Philadelphia Polyclinic; Dr. William J. Potter (61); Dr. Dudley T. Cooke (77); Dr. Howard S. Anders (83); Dr. Alexander W. Ransley (58), etc.

Among those whose work has been in educational fields may be mentioned: Dr. Thomas M. Drown (34), president of Lehigh University; Rev. Jeremiah P. J. O'Connor (34), president of Boston College; John Edgar (36), president of Wilson College; James L. Hays (17), president of the New Jersey State Board of Education; Thomas E. Cahill (4), founder of the Roman Catholic High School of Philadelphia; and Rev. Dr. Robert M. Luther (34), president of Pegu High and Normal School (Burmah). A group of principals of the higher schools of Philadelphia,—George Inman Riché

(19), George Howard Cliff (72), J. Monroe Willard (52), William L. Sayre (31), Andrew J. Morrison (41), and William D. Rorer (80). A large group of the principals and supervisors of the elementary schools of Philadelphia, including Edward Gideon (12), Dr. Edgar A. Singer (33), Dr. Andrew MacFarlane (32), Dr. William H. Samuel (42), Dr. Thomas G. Gentry (42), J. Fletcher Sickel (23), Henry C. Payne (46), William J. Caskey (54), Charles S. Boyer (64), William H. Sowden (74), Alfred V. Sayre (78), William H. Arnhold (80), Dr. Oliver P. Cornman (81), Franklin F. Cartledge (87), William H. McLaughlin (89), Charles A. Coulomb (91), Robert C. String (92), Dr. Oscar Gerson (95), Guy Gundaker (96), Abel J. Evans (96), George V. Z. Long (98), Theodore L. MacDowell (98), Edwin Y. Montanye (98), John Christopher (98), Henry J. Gideon (98), Samuel L. Chew (98), Llewellyn Laws (98), Edward Schwinn (99), etc.; also Thomas May Peirce (23), founder and principal of a business college; Lewis J. Weichmann (36), of the Anderson Business School, Indiana, etc.

In Appendix F there is given a complete list of the Alumni who have served in the army and navy, of whom a few names may be mentioned here: Brig.-Gen. Gustavus W. Town (29), killed at Chancellorsville; Brig.-Gen. Lewis H. Pelouze (13), assistant adjutant-general, U.S.A.; Brig.-Gen. George W. Mindil (34); Brig.-Gen. Lewis H. Carpenter (26); Gen. Frederick F. Cavada (15), the "Fire King" of the Cuban rebellion; Gen. James C. Lynch (27); Col. Joseph C. Audenried (34), of whom Gen. Sherman once said that he was the most unselfish man in the line of duty in the whole army; Col.

Wallace F. Randolph (34), chief of the Bureau of Artillery, U.S.A.; Col. William J. Volkmar (46), assistant adjutant-general, U.S.A.; Col. Silas Crispin (11); Col. Frank M. Coxe (34); Col. Oliver B. Knowles (34); Col. Robert P. Dechert (37); Col. Robert L. Orr (25), who was awarded a Congressional medal for gallantry at the storming of Petersburg; Captain James M. Forsyth (35), of the battleship "Indiana;" Lieut. Francis J. Haeseler (71), who served on the "Texas" during the Spanish War; Lieut. James G. Doyle (76), flag-lieutenant of the "Brooklyn" during the battle of Santiago, etc.

No profession has appealed to more of the Alumni than the law, and in none has greater distinction been achieved. From the list of several hundred names the following may be given: John G. Johnson (30); George Harding (1); Professor William Trickett (30), dean of the School of Law of Dickinson College; James Brown Scott (84), dean of the College of Law of the University of Illinois; Henry E. Busch (9); George L. Crawford (13); David W. Sellers (15); Alexander P. Colesberry (21); G. Harry Davis (31); Henry R. Edmunds (32); Joseph R. Rhoads (32); Samuel B. Huey (33); E. Cooper Shapley (33); Robert H. Hinckley (34); Alfred C. Ferris (35); Thomas E. Merchant (38), assistant city solicitor; Byerly Hart (38); Joseph Mason (40); Francis F. Brightly (41); John H. Campbell (43); Stanislaus Remak (43); Lewis Waln Smith (44); William H. Staake (45); Andrew J. Maloney (45); Isaac L. Rice (47); John B. Colahan, Jr. (48); S. Edwin Megargee (48); John K. McCarthy (49); A. T. Freedley (51); Samuel E. Cavin (53), solicitor for the

Guardians of the Poor; Frank P. Pritchard (55); Edwin F. Glenn (55); James Alcorn (56), assistant city solicitor; Louis Brégy (56); W. Wilkins Carr (56); Alexander Simpson, Jr. (57); Pierce Butler (57); Robert N. Simpers (58); Robert W. Finletter (59); Peter Boyd (60); Otto Wolff (61); Luther E. Hewitt (62); William Raimond Baird (63); Emanuel Furth (63); Frederick A. Sobernheimer (64); John Sparhawk, Jr. (64); Robert S. Clymer (64), Common Pleas judge in New Jersey; Albert B. Weimer (65); Harry Shelmire Hopper (66); Henry J. Scott (66), assistant district attorney; Franklin L. Lyle (67); Joseph W. Catherine (68), assistant city solicitor; Isaac N. Solis (68); H. S. P. Nichols (69); Edward G. Taulane (69); Walton Penniwell (71); Frederick L. Breitinger (71); Ormond Rambo (71); Charles Biddle (72); John F. Lewis (73); Henry V. Massey (73); Adolph Eicholz (74); E. Clinton Rhoads (75); John C. Bell (75); W. Wilson Carlile (79); Horace M. Rumsey (86); Clinton Rogers Woodruff (86); Oscar Leser (88), tax judge, Baltimore; John A. McCarthy (91); John M. Monaghan (91); John McClintock, Jr. (96); Alfred L. Wanamaker (97); George I. Merrill (99), etc. Additional names will be found in the lists of public officials given above.

In railroad affairs High School men will be found in every grade of work,—John P. Green (26) and Edmund Smith (11), vice-presidents of the Pennsylvania Railroad Company; John R. Fanshawe (35), secretary of the Lehigh Valley Railroad Company; Joseph S. Harris (24), president of the Philadelphia and Reading Railway Company. In the Pennsylvania Railroad, Robert W.

Downing (22), controller, and William H. Brown (25), chief engineer; Stephen W. White (32), secretary of the Northern Central Railroad Company; George W. Creighton (64) and Charles S. Crowell (71). Clinton G. Hancock (44), general passenger agent of the Philadelphia and Reading Railway Company; David W. Dickson (24), president of the Philadelphia Traction Company; James G. McCollin (1), secretary of the Mine Hill Railroad Company; William Taylor (1), treasurer of the West Jersey Railroad Company; Henry W. Dunne (65), superintendent of the New York, Philadelphia, and Norfolk Railroad Company; John M. Winslow (61), of the Mexican National Railway Company; William F. Colton (34) and James D. Moffett (66), of the Rio Grande and Western Railroad Company, etc.

Among financiers, mention may be made of Charles H. Banes (12), president of the Market Street National Bank; Hugh W. Catherwood (16) and John Torrey (1), vice-presidents of the Corn Exchange Bank; William D. Gardner (4), president of the Sixth National Bank; Joseph L. Caven (21), Frank K. Hipple (28), Joseph R. Rhoads (32), A. A. Stull (46), William R. Nicholson (56), James Aylward Develin (72), all presidents of prominent trust companies; E. W. Clark (2), Joseph W. Drexel (13), Robert Glendenning (29), and George I. Bodine (42), bankers of Philadelphia; Richard Y. Cook (39), John Jay Gilroy (48), and Harry J. Delaney (54), officers of the Guarantee Trust and Safe Deposit Company; E. A. Landell (13), president of the Kensington Bank; Cornelius Weygandt (12), president of the Western Bank; Frank C. Moore (40), president of the Continental Insurance Company, of New

York; George S. Philler (19), president of the First National Bank; Dr. John Rommel, Jr. (13); Samuel G. Dennison (16); Simon A. Stern (29); Charles V. MacManus (34); William F. North (42); Richard L. Austin (70); Francis J. Crilly (25); Jesse J. Barker (55); William L. DuBois (40); Jarvis Mason (2); Conrad B. Day (14); Joseph A. Sinn (58); Theodore Kitchen (24); Richardson L. Wright, Jr. (45); John F. McMenamin (48); Jesse G. Hammer (36); Charles H. Biles (35); Dr. John H. W. Chestnut (50); William K. Kling (78), etc.

In the active business life of the community High-School men have borne a leading part. Nine of the Cramps have been former students of the High School, including Charles H. (6), William M. (14), Samuel B. (15), Jacob C. (23), Theodore (29), Edwin S. (58), Howard C. (76), Theodore C. (76), and Walter S. (83). Of the firm of the Baldwin Locomotive Works, William P. Henszey (16), William C. Stroud (33), William L. Austin (55), and Alba B. Johnson (66) are Alumni of the High School, and another partner, George Burnham, was admitted to the school, although he did not attend its sessions.

Among other Alumni in business life may be mentioned Thomas Dolan (16), Clement A. Griscom (32), P. A. B. Widener (20), Charles T. Yerkes (27), Charles F. Gummey (18), Oliver Landreth (12), Alfred H. Love (12), William B. MacKellar (42), Joseph L. Adamson (4), J. Arthur Adamson (67), John Story Jenks (27), Edme H. D. Fraley (27), Col. Joseph D. Potts (11), Edward P. Hipple (33), John R. and James S. Whitney (11), Clement R. Wainwright (21), E. Dunbar Lock-

wood (25), Clarence S. Bement (36), A. Graham Elliot (32), George Eldredge (29), Samuel T. Fox (33), William J. Pollock (16), Thomas Shallcross (33), William McIntyre (37), J. Bell Austin (41), Emil P. Albrecht (75), Benjamin F. Teller (57), James Butterworth (34), Conrad F. Clothier (9), Harry F. West (20), Maj. William H. Lambert (35), William M. Abbey (1), John H. Dialogue (5), B. F. Dewees (5), Lewis H. Redner (13), William F. Read (16), Henry Cochran (16), Thomas Bromley (24), J. Edward Addicks (33), Meyer Goldsmith (33), Daniel W. Grafly (34), Alexander P. Brown (35), Capt. Frederick Schober (37), David W. Hunt (40), Robert Dornan (40), Harry C. Francis (40), Theodore Justice (41), Albert H. Dingee (44), George D. Melloy (44), Alfred C. Gibson (48), Albert H. Disston (49), Isidor Levin (49), John J. Foulkrod (50), Clayton F. Shoemaker (50), Langdon C. Stewardson (54), Edward G. Ashbrook (55), George H. Buchanan (55), Craig N. Ligget (55), George J. Garde (56), William W. Foulke (60), William T. Tilden (63), Benjamin F. Banes (64), Charles H. Elliott (65), George E. Kirkpatrick (66), George D. Gideon (67), Adolph Woll (67), Stanley G. Flagg, Jr. (71), Irwin N. Megargee (71), A. Lincoln Acker (79), etc.

These names, which might be supplemented with others of equal distinction, are the best exposition of the character of the training given at the Central High School and furnish the most satisfactory justification for the system of public education which has yielded so bountiful results.

Such is the record of a great American public school!

NOTE.—The officers of the Associated Alumni since incorporation in 1873 have been as follows:

Presidents.

Edme H. D. Fraley, A.M., Twenty-seventh Class, incorporation to December 16, 1886.

John F. Lewis, A.M., Seventy-third Class (*pro tempore*), December 16, 1886, to February 9, 1887.

Hon. Robert E. Pattison, A.M., LL.D., Fifty-fifth Class, February 9, 1887, to February 15, 1900.

John R. Fanshawe, A.M., Thirty-fifth Class, from February 15, 1900.

Vice-Presidents.

Daniel W. Howard, A.M., Thirteenth Class, incorporation to February 9, 1887.

George Stuart, A.M., Ph.D., Twentieth Class, incorporation to February 9, 1887.

Hon. James Gay Gordon, A.M., Sixtieth Class, February 9, 1887, to February 15, 1888.

John F. Lewis, A.M., Seventy-third Class, February 9, 1887, to December 5, 1899.

John R. Fanshawe, A.M., Thirty-fifth Class, February 15, 1888, to February 15, 1900.

William H. Staake, A.M., LL.B., Forty-fifth Class, from February 15, 1900.

Jacob Singer, A.B., LL.B., Sixty-ninth Class, from February 15, 1900.

Treasurers.

Lewis L. Houpt, A.M., Third Class.

John Story Jenks, A.M., Twenty-seventh Class.

George B. Hawkes, A.M., LL.B., Eighty-fifth Class, December 16, 1886, to February 9, 1887.

William Jenks Fell, A.M., Twenty-ninth Class, February 9, 1887, to June 21, 1888.

Charles Biddle, A.M., Seventy-second Class, June 21, 1888, to February 15, 1900.

George E. Kirkpatrick, A.M., Sixty-sixth Class, from February 15, 1900.

Recording Secretaries.

Rev. Henry P. Hay, A.M., D.D., LL.D., Thirtieth Class.

William H. Peterman, A.M., Sixty-first Class.

George B. Hawkes, A.M., LL.B., Eighty-fifth Class, from December 16, 1886.

Corresponding Secretaries.

James A. Kirkpatrick, A.M., First Class, incorporation to June 3, 1886.

John C. Bell, A.M., LL.B., Seventy-fifth Class, February 9, 1887, to February 15, 1888.

George J. Brennan, A.B., Seventy-ninth Class, February 15, 1888, to February 11, 1891.

William John Long, A.M., Ninety-fifth Class, from February 11, 1891.

Assistant Secretary.

Henry R. Johnson, Ninety-first Class, February 13, 1889, to February 11, 1891.

Masters of Archives.

John J. Weaver, A.M., Thirty-fifth Class, incorporation to February 9, 1887.

John R. Fanshawe, A.M., Thirty-fifth Class, February 9, 1887, to February 15, 1888.

Frederick Schober, A.M., Thirty-seventh Class, February 15, 1888, to February 9, 1889.

Daniel W. Howard, A.M., Thirteenth Class, February 13, 1889, to October 3, 1899.

Franklin Spencer Edmonds, A.M., Ph.B., Ninety-sixth Class, from October 3, 1899.

Librarian.

Edwin J. Houston, A.M., Ph.D., Forty-third Class, from June 25, 1890.

Historian.

Harry Shelmire Hopper, A.M., LL.B., Sixty-sixth Class, from February 15, 1893.

APPENDIX A

LIST OF OFFICERS OF THE BOARD OF PUBLIC EDUCATION AND MEMBERS OF THE HIGH SCHOOL COMMITTEE.

PRESIDENTS OF THE BOARD OF PUBLIC EDUCATION SINCE ESTABLISHMENT OF THE CENTRAL HIGH SCHOOL.

Thomas Dunlap.....1836–1840.
George M. Wharton.....1840–1841.
Henry Leech.....1841–1844.
John Robbins, Jr.....1844, July to November.
John Miller.....1844–1847.
George M. Wharton.....1847–1849.
James Peters.....1849–1850.
George M. Wharton.....1850–1851.
Daniel S. Beideman.....1851–1853.
George M. Wharton.....1853–1854.
Thomas G. Hollingsworth.....1854–1857.
William J. Reed.....1857–1859.
Henry Bumm.....1859–1861.
Benjamin M. Dusenbery.....1861–1862.
Leonard R. Fletcher.....1862–1864.
Edward Shippen.....1864–1869.
Daniel Steinmetz.....1869–1870.
M. Hall Stanton.....1870–1877.
James Long.....1877–1879.
Edward T. Steel.....1879–1889.
Isaac A. Sheppard.....1889–1897.
Simon Gratz.....1897–1898.
Samuel B. Huey.....1898–

VICE-PRESIDENTS OF THE BOARD OF PUBLIC EDUCATION.

Samuel B. Huey.....1897–1898.
Henry R. Edmunds.....1898–

CHAIRMEN OF THE HIGH SCHOOL COMMITTEE.

George M. Wharton.....1837–1847.
George Emlen.....1847–1849.
Nathan Nathans.....1849–1850.
George Emlen.....1850–1851.
Nathan Nathans.....1851–1853.
James Peters.....1853–1854.
George M. Wharton.....1854–1855.
Henry Herbert.....1855–1856.
William J. Reed.....1856–1857.
Richard R. Montgomery.....1857–1858.
Washington J. Jackson.....1858–1859.
Stephen Farrand.....1859–1860.
Thomas G. Hollingsworth.....1860–1862.
James Freeborn.....1862–1870.
Charles F. Abbot.....1870–1873.
Daniel Steinmetz.....1873–1874.
James Freeborn.....1874–1888.
Samuel B. Huey *.....1888–

VICE-CHAIRMAN OF THE HIGH SCHOOL COMMITTEE.

Henry R. Edmunds.....1898–

MEMBERS OF THE HIGH SCHOOL COMMITTEE.

George M. Wharton.....1837–1847.
George M. Justice.....1837–1841.
Andrew Hooton.....1837–1840.
James Carstairs.....1837, April to November.
Thomas G. Hollingsworth.....1837–1841.
Henry Leech.....1838–1841.
James Campbell.....1840–1842.
George Emlen.....1841–1849.
Richard Vaux.....1841–1842.
Abraham Helfenstein.....1841–1842.
Jacob Heyberger.....1842–1844.
Joseph Yeager.....1842–1846.
John Miller.....1842–1843.
Hugh O'Donnell.....1843–1845.

* By direction of the Board since 1898.

Samuel Grice.....1844–1846.
John P. Colcord.....1845–1847.
William English.....1846–1847.
Daniel S. Beideman.....1846–1847.
John Miller.....1847–1849.
Thomas G. Hollingsworth.....1847–1849.
William Notson.....1847–1848.
Theodore Cuyler.....1847–1850.
John Clouds.....1848–1851.
Nathan Nathans.....1849–1850.
Isaac Ashmead.....1849–1850.
Benjamin Baker.....1849–1850.
George Emlen.....1850–1851.
Thomas G. Hollingsworth.....1850–1851.
Daniel S. Beideman.....1850–1851.
James Peters.....1850–1851.
Nathan Nathans.....1851–1854.
William J. Reed.....1851–1852.
George M. Wharton.....1851–1852.
Harlan Ingram.....1851–1853.
Tillinghast K. Collins.....1851–1853.
Thomas G. Hollingsworth.....1852–1854.
C. Campbell Cooper.....1852–1853.
George M. Wharton.....1853, February to July.
William F. Small.....1853–1854.
C. Campbell Cooper.....1853–1854.
James Peters.....1853–1854.
George M. Wharton.....1854–1855.
Joseph T. Thomas.....1854–1855.
Spencer Roberts.....1854–1855.
Samuel Taylor.....1854–1855.
George P. Mercer.....1854–1856.
Alfred W. Green.....1855–1857.
Richard R. Montgomery.....1855–1858.
Benjamin F. Warren.....1855–1857.
Henry Herbert.....1855–1856.
William J. Reed.....1856–1857.
Isaac Sulger.....1856–1857.
Washington J. Jackson.....1857–1860.
Charles Frishmuth.....1857–1858.
John Conry, M.D.....1857–1859.
Charles J. Wister, Jr.....1857–1859.

Thomas G. Hollingsworth.....1858–1859.
Thomas W. Marchment.....1858–1862.
Stephen Farrand.....1859–1860.
Thomas Haig, Jr.....1859–1860.
Michael Blynn.....1859–1860.
Thomas G. Hollingsworth.....1860–1862.
George Inman Riché.....1860–1861.
Joseph B. Smith.....1860–1861.
William Adamson.....1860–1861.
Thomas Fitzgerald.....1861–1862.
Lewis Bitting.....1861–1862.
Thomas Wood.....1861–1862.
James Freeborn.....1862–1870.
Thomas Potter.....1862–1863.
Daniel Witham.....1862–1865.
John Hunsworth.....1862–1863.
John Rittenhouse.....1862–1868.
Edward Shippen.....1863–1864.
Charles Welsh.....1863–1864.
DeWitt C. Moore.....1864–1866.
James W. Fletcher.....1864–1867.
Samuel Scheide.....1865–1866.
Robert W. Cushman.....1866–1868.
James Milligan, Jr.....1866–1867.
Washington L. Bladen.....1867–1868.
William O. Kline.....1867–1868.
Charles M. Lukens.....1868–1871.
Charles Harmer.....1868–1869.
Stephen H. Smith.....1868–1871.
Andrew Nebinger, M.D.....1868–1887.
William Ridings.....1869–1870.
Charles F. Abbot.....1870–1873.
Michael Blynn.....1870–1873.
Daniel Steinmetz.....1871–1874.
Thomas R. Davis.....1871–1874.
James Freeborn.....1873–1888.
M. R. Harris.....1873–1874.
William J. Gillingham.....1874–1875.
John Shedden.....1874–1878.
James S. Whitney.....1874–1880.
Thomas R. Davis.....1875–1879.
Charles F. Abbot.....1878–1879.

Spencer Roberts.....1879–1886.
M. Hall Stanton.....1879–1889.
Alexander Adaire.....1879–
John McAvoy, M.D.....1879–1880.
Edward Lewis.....1879–1880.
James Pollock.....1879–1884.
Charles F. Abbot.....1880–1885.
Isaac A. Sheppard.....1880–1883.
William J. Pollock.....1880–1900.
Joseph C. Ferguson.....1883–1888.
A. M. Spangler.....1884–1889.
John L. Kinsey.....1885–1895.
Thomas W. Marchment.....1886–1887.
Samuel W. Pennypacker.....1887–1889.
James S. Whitney.....1887–1889.
Samuel B. Huey.....1888–
Richardson L. Wright.....1888–
Thomas E. Merchant.....1889–1895.
A. W. Duvall, M.D.....1889–1890.
George W. Crouch.....1889–1892.
Thomas W. Marchment.....1889–1891.
Joseph R. Rhoads.....1890–1895.
Thomas G. Morton.....1891–1892.
Herbert Welsh.....1892–1893.
Charles E. Morgan, Jr.....1893–1894.
Daniel M. Collamer.....1893–1894.
Thomas A. Robinson.....1894–
William Wrigley.....1894–
Charles E. Morgan, Jr.....1895–1898.
Harvey H. Hubbert.....1895–1898.
Henry R. Edmunds.....1895–
Joseph R. Rhoads.....1898–
Joel Cook.....1898–
William T. Tilden.....1899–
Joseph W. Catharine.....1900–

SUPERINTENDENTS OF SCHOOLS.

Alexander Dallas Bache.....1841–1842.
(This office was discontinued from 1842 to 1883.)
James MacAlister.....1883–1891.
Edward Brooks.....1891–

SECRETARIES OF THE BOARD OF PUBLIC EDUCATION.

Richard Penn Smith.....1838–1841.
Thomas B. Florence.....1841–1849.
Robert J. Hemphill.....1849–1862.
James D. Campbell.....1862–1864.
Henry W. Halliwell.....1864–1898.
Andrew F. Hammond.....1898–

ASSISTANT SECRETARIES OF THE BOARD OF PUBLIC EDUCATION.

Henry W. Halliwell.....1863–1864.
James Dick.....1864–1875.
Andrew F. Hammond.....1875–1898.
William Dick.....1898–

APPENDIX B

LIST OF PRESIDENTS, PROFESSORS, INSTRUCTORS, AND ASSISTANTS AT THE CENTRAL HIGH SCHOOL FROM 1838 TO 1901, ARRANGED ALPHABETICALLY.

[* indicates those deceased. † indicates present member of instructing corps.]

* Lewis Angelé.

B. Biberach, Würtemberg. D. 13 October, 1874, Philadelphia. Studied at Univ. of Tübingen. 1846, came to America; 1847–59, private school, Pottsville, Pa.; 1859–60, private instruction, Philadelphia; 1860–74, Professor of German, C. H. S.

* Alexander Dallas Bache, LL.D.

B. 19 July, 1806, Philadelphia. D. 17 February, 1867, Newport, R. I.

1825, graduated from U. S. Military Academy; 1826–28, Assistant Professor of Engineering, U. S. Military Academy; 1828–36, Professor of Natural Philosophy and Chemistry in Univ. of Pa.; 1836, LL.D. (Univ. of N. Y.); 1837, LL.D. (Univ. of Pa.); 1836–42, President of Girard College; 1839–42, Principal of C. H. S. and, 1841–42, Superintendent of Schools; 1842–43, Professor of Natural Philosophy and Chemistry, Univ. of Pa.; 1843–67, Superintendent of U. S. Coast Survey; 1846, one of incorporators of Smithsonian Institution; 1851, LL.D. (Harvard); Vice-President of U. S. Sanitary Commission; President of the American Philosophical Society and of American Association for the Advancement of Science; Incorporator and first President of National Academy of Sciences; honorary member of many scientific and philosophical societies.

His published papers include more than one hundred and fifty titles upon various topics in Education, Physics, Chemistry, and Engineering. His most extensive work was the "Observations at the Magnetic and Meteorological Observatory at Girard College."

† David Wesley Bartine, A.M., M.D.

B. 26 March, 1837, Bucks Co., Pa.

Studied at State Normal School at Millersville. 1857–65, Teacher in public schools of Bucks Co., Philadelphia, and Camden; 1866–79, Professor of Commercial Calculation, C. H. S.; 1869, A.M. (Dickinson); 1871, M.D. (Hahnemann); 1879——, Professor of Algebra, C. H. S.

Joseph Boggs Beale, A.M.

B. 10 December, 1841, Philadelphia.

1862, A.B. (C. H. S.); 1867, A.M. (C. H. S.); studied at Academy of Fine Arts; 1862–66, Professor of Drawing and Writing, C. H. S.; 1867, taught drawing at Polytechnic College and Crittenden's Commercial College, Philadelphia.

Illustrator of numerous books of History, Fiction, Poetry, and Prose.

George J. Becker.

B. 13 April, 1816, in Germany.

1844–53, Instructor in Writing, Drawing, Bookkeeping, C. H. S.; 1853–96, Professor of Drawing and Bookkeeping at Girard College.

Author of "Ornamental Penmanship," "System of Bookkeeping," etc.

† Henry Heston Belknap, LL.B.

B. 23 April, 1875, Philadelphia.

Studied three years at C. H. S. and two years at Wharton School, Univ. of Pa. 1900, LL.B. (Univ. of Pa.); 1894–96, Instructor and Assistant to President of C. H. S.; 1895——, Instructor in History and Drawing, C. H. S.

† Samuel Erwin Berger, A.M.

B. 19 June, 1866, Bucks Co., Pa.

1889, A.B. (Lehigh); 1893, A.M. (Lehigh); 1889–94, Instructor in Latin and Greek, C. H. S.; 1894–99, Assistant Professor in Latin and Greek, C. H. S.; 1899——, Professor of Greek, C. H. S.

* James Curtis Booth, A.M., LL.D.

B. 28 July, 1810, Philadelphia. D. 21 March, 1888, Haverford, Pa.

1829, A.B. (Univ. of Pa.); 1831, studied at Renss. Poly. Instit.; 1833–36, at Hesse-Cassel, Berlin, and Vienna; 1836, established in Philadelphia the first laboratory in the United States for instruction in chemical analysis and chemistry applied to the arts; 1836–45, Professor of Applied Chemistry, Franklin Institute; 1842–45, Professor of Chemistry and Natural Philosophy, C. H. S.; 1851–55, at Univ. of Pa.; 1849–87, melter and refiner, U. S. Mint, Philadelphia; 1867, LL.D. (Bucknell); 1883–84, President of American Chemical Society; 1884, Ph.D. (Renss. Poly. Instit.).

Published a number of scientific articles and translations and "Recent Improvements in the Chemical Arts," and, assisted by Martin H. Boyé and others, prepared "Encyclopædia of Chemistry."

Martin Hans Boyé, A.M., M.D.

B. 6 December, 1812, Copenhagen, Den.

1831, entered Univ. of Copenhagen; 1835, graduated from Polytechnic School; 1836–44, studied in private laboratories and clinics in New York and Philadelphia; 1844, M.D. (Univ. of Pa.) and Honorary A.M. (Univ. of Pa.); 1845–59, Professor of Natural Philosophy and Chemistry, C. H. S.

Wrote "Pneumatics, or the Physics of Gases," "Chemistry, or the Physics of Atoms," and articles in "Encyclopædia of Chemistry."

† Francis Burke Brandt, A.B., Ph.D.

B. 13 June, 1865, Philadelphia.

1878–80, C. H. S.; 1892, A.B. (Harvard); 1892–94, Instructor, Columbia Grammar School, New York City; 1894–95, University Fellow in Philosophy, Columbia; 1895, Ph.D. (Columbia University); 1895–96, Instructor in English and History, C. H. S.; 1896——, Professor of Pedagogy and Head of the Department of Pedagogy, C. H. S.

Author of "Friedrich Eduard Beneke: the Man and his Philosophy;" editor of *Philadelphia School of Pedagogy Record.*

* François Amédée Brégy, A.M.

B. 1810 in Mons, France. D. 31 December, 1877, in Philadelphia.

Graduate, Univ. of Paris. 1841–42, Teacher at Norfolk Academy; 1843–58, Professor of French and Spanish, C. H. S.; 1858–62, Professor of French and Spanish, Girard College; 1862–66, Professor of French, C. H. S.; 1869–72, Instructor, Univ. of Pa.; 1872–77, Professor of French, Univ. of Pa.

† Robert Morris Brookfield, A.B.

B. 13 March, 1873, Philadelphia.

1891, A.B. (C. H. S.); 1892–96, U. S. Military Academy, West Point; 1896, 2d Lt. U. S. A.; 1898, 1st Lt. U. S. A.; September, 1900, Capt. and Asst. Q. M., U. S. V.; October, 1900——, Instructor in Mathematics, C. H. S.

† David J. Campbell.

B. 12 December, 1862, Argyle, N. Y.

Studied in Philadelphia public schools and at West Hebron Academy, N. Y. Taught in New York and Vermont public schools seven years; Lingle College of Phonography, Philadelphia, assistant, two years; Campbell College of Phonography, Philadelphia, principal and proprietor, three years; Lingle and Campbell College of Phonography, principal and part proprietor, three years; 1900——, Instructor in Stenography and Typewriting, C. H. S.

Author of "Straws: a Mosaic of Odds and Ends" and "Campbell's Shorthand Charts."

* Thomas Broome Cannon, A.B.

B. 1 May, 1825. D. 8 July, 1887.

1845, A.B. (C. H. S.); 1845–46, Assistant in C. H. S.; 1846, manager for William Mann, stationer.

† Oscar Charles Sumner Carter.

B. 1 March, 1857, Philadelphia.

Studied at Polytechnic School of Mines. 1877–79, Univ. of Pa.; chemist, Midvale Steel Works; 1880–89, Assistant Professor of Chemistry, C. H. S.; 1889——, Professor of Mineralogy and Geology and Associate in Chemistry, C. H. S.; 1887, Professor of

Chemistry, Spring Garden Institute; 1888, Professor of Chemistry, United Chautauqua Circles of Philadelphia.

Author of "Ores, Minerals, and Geology of Montgomery County," scientific articles in *Journal of Franklin Institute, Proceedings of American Philosophical Society, American Chemical Journal, London Chemical News, Verein der Bohrtechniker,* etc.

† FREDERICK FOSTER CHRISTINE, A.M., Ph.D.

B. 17 August, 1834, Pemberton, N. J.

1853–80, Principal of public schools, 22d Section, Philadelphia, and Superintendent of same; 1853–82, Principal of public night schools, Philadelphia; 1871, A.M. (C. H. S.); 1880–94, Professor of Mental and Political Science, C. H. S.; 1882–97, Professor of English and Mathematics, Artisans' Night School, and Principal of same since 1897 (in 1898 name changed to "Evening High School"); 1894——, Professor of Logic and Rhetoric, C. H. S.; 1898, Ph.D. (C. H. S.).

Author of "Lectures on School Law."

GEORGE HOWARD CLIFF, A.M.

B. 3 May, 1859, Tobyhanna, Pa.

1878, A.B. (C. H. S.); Teacher and Principal of elementary schools; 1883–93, Professor of Higher Arithmetic and Mensuration, and later, Composition, Logic, and Rhetoric, C. H. S.; 1890–93, Professor of Methods, School of Pedagogy, C. H. S.; 1893–98, Principal of Philadelphia Normal School for Girls; 1900——, Treasurer, De Long Hook and Eye Company; 1899——, Trustee, Wagner Free Institute of Science; 1900——, Trustee, Pennsylvania Museum and School of Industrial Art.

1896–98, Editor *The Teacher.* Author of "The Central High School of Philadelphia: an Historical Sketch."

GEORGE CORLISS, A.M.

B. October, 1838.

1856, A.B. (C. H. S.); 1861, A.M. (C. H. S.); 1868–75, Professor of Bookkeeping, C. H. S.; Actuary of Academy of Fine Arts; editorial staff of *Philadelphia Record;* in charge of Philadelphia paintings at World's Fair at Chicago.

* John Chapman Cresson, A.M., Ph.D.

B. 16 March, 1806, Philadelphia. D. 27 January, 1876.

Educated at Friends' Academy and attended lectures on agriculture at Univ. of Pa. 1837–42, Professor of Mechanics and Natural Philosophy, Franklin Institute; 1842, Professor at C. H. S.; 1844, A.M., *honoris causa* (Univ. of Pa.); Ph.D., *honoris causa* (Bucknell); 1836–64, Superintendent of Philadelphia Gas Works; Chief Engineer of Fairmount Park, etc.; 1847–76, President of Mine Hill and Schuylkill Haven Railroad.

* Joseph Alexander Deloutte, A.M.

D. 1856 (?).

1840–43, Professor of French, C. H. S.; 1848–50, Professor of French, Girard College.

† Charles Sumner Dolley, M.D.

B. 16 June, 1856, Elyria, Ohio.

Elementary training in private schools of Rochester, N. Y., Paris, and Philadelphia. 1874–78, student, Syracuse University; 1882, M.D. (Univ. of Pa.); 1883–84, graduate student in Biology, J. H. U.; 1884, pursued biological work in Naples and Leipsic; 1885, Assistant Professor of Biology at Univ. of Pa. and at Swarthmore College; 1886, full Professor in both institutions; 1888, resigned from Swarthmore; 1890, Lecturer in Botany, C. H. S.; 1892, resigned from Univ. of Pa.; 1894——, Professor of Biology, C. H. S.

Published translations of Dr. Ferdinand Cohn's "Bacteria" and Dr. Th. W. Engelmann's "The Physiology of Protoplasmic Motion," "The Technology of Bacteria Investigation," numerous contributions to *Medical News*, *Microscopical Journal*, *Proceedings Academy Natural Sciences*, etc.

1894–95, member of editorial staff, biological department, of "Standard Dictionary" and of Gould's "Dictionary of Medicine."

† Howard Weidener DuBois, A.B.

B. 16 September, 1868, Philadelphia.

1887, A.B. (C. H. S.); 1889–91, course in Mining Engineering at Lehigh Univ.; 1891–93, Civil and Mining Engineer; 1893——, Professor of Applied Mathematics and Astronomy, C. H. S.

Author of technical articles in scientific journals.

† Franklin Spencer Edmonds, A.M., Ph.B.

B. 28 March, 1874, Philadelphia.

1891, A.B. (C. H. S.); 1893, Ph.B. (Univ. of Pa.); 1893–94, Assistant Secretary, American Society for Extension of University Teaching; 1894–95, Andrew D. White Fellow in Political and Social Science, Cornell University; 1895 (February)–97, Instructor in History, C. H. S.; 1896, A.M. (C. H. S.); 1897——, Assistant Professor of Political Science, C. H. S.; Master of Archives, Associated Alumni, C. H. S.

Author of "An Experiment in Civic Education," "Progress in Education during Nineteenth Century," and other educational articles. 1896–1900, Editor *The Teacher*.

† Joseph Faltermayer, B.S.

B. 8 January, 1877, Philadelphia.

1899, B.S. (C. H. S.); 1899–1900, student at Lehigh University; 1900——, Assistant to the President, C. H. S.

Chester Nye Farr, Jr., A.M., LL.B.

B. 5 December, 1869. Reading, Pa.

1888, A.B. (C. H. S.); 1891, B.S. in Civil Engin. (Univ. of Pa.); 1890–93, Instructor in Applied Mathematics, C. H. S.; 1892, A.M. (C. H. S.); 1893–95, Instructor in English, C. H. S.; 1894, LL.B. (Univ. of Pa.); 1895——, Assistant City Solicitor, Philadelphia.

* James Boorman Fisher, A.M.

B. 7 September, 1833, Paterson, N. J. D. 20 May, 1889, West Town, N. Y.

1853, A.B. (C. H. S.); 1853–54, taught at Falls of Schuylkill; 1854–58, Assistant at C. H. S.; 1858, A.M. (C. H. S.); 1858–61, Principal of High School, Norfolk, Va.; 1862–89, in Presbyterian ministry.

* Samuel Sparks Fisher.

B. 11 April, 1832, St. Joseph, Mich. D. 14 August, 1874.

1851, A.B. (C. H. S.); 1851–53, Assistant at C. H. S.; admitted to Bar in Cincinnati; 1864, Col. 138th Reg. Ohio N. G.; 1869–71, U. S. Commissioner of Patents.

Author of "Reports of Patent Cases."

† Joseph C. Fox, A.M.

B. 26 April, 1868, Germantown, Pa.

1885, A.B. (C. H. S.); 1890, graduated from U. S. Military Academy; 1890, A.M. (C. H. S.); 1890–97, Lieutenant, 13th U. S. Infantry; 1897, retired in consequence of ill-health; 1900——, Instructor in Mathematics (C. H. S.).

* John Fries Frazer, A.M., Ph.D., LL.D.

B. 8 July, 1812, Philadelphia. D. 12 October, 1872, Philadelphia.

1830, A.B. (Univ. of Pa.); 1854, Ph.D. (Univ. of Lewisburg); 1857, LL.D. (Harvard); Laboratory Assistant to Alexander Dallas Bache; Assistant to Dr. Robert Hare, Univ. of Pa.; 1842–44, Professor of Chemistry and Natural Philosophy, C. H. S.; 1844–72, Professor of Chemistry and Natural Philosophy, Univ. of Pa.; 1855–68, Vice-Provost; 1859–60, Acting Provost, Univ. of Pa.; 1850–66, editor *Franklin Institute Journal.*

* John Frost, A.B., LL.D.

B. 26 January, 1800, Kennebunk, Me. D. 28 December, 1859, Philadelphia.

1822, A.B. (Harvard); 1823–38, Principal of schools, Boston and Philadelphia; 1838–45, Professor of English Literature, C. H. S.; 1843, LL.D. (Marietta College).

His publications include "History of the World" (three vols.); "Pictorial History of the United States" (two vols.); "Beauties of English History," and more than three hundred compilations of histories and biographies.

† Thomas Robert Galbraith, A.B., B.S. in E.E.

B. 20 June, 1873, Philadelphia.

1893, A.B. (C. H. S.); 1897, B.S. in E.E. (Univ. of Pa.); 1897——, Instructor in English and History in C. H. S.

* Georges Gérard, A.M.

B. in France. D. in New York City.

1848–53, Consular Agent of France at Portland, Me.; 1859–61, Professor of French, C. H. S.; 1862–66, U. S. Consul at St. Helena; 1867–71, Consul at Cape Town; 1874–80, Commercial Agent, Port Stanley, Falkland Islands.

† JAMES HENRY GRAHAM, A.B., Ph.B.

B. 24 May, 1873, Philadelphia.

1891, A.B. (C. H. S.); 1893, Ph.B. (Univ. of Pa.); 1893–95, graduate work in Mathematics and History (Univ. of Pa.); 1893–94, First Assistant, Grammar School; 1894–99, Instructor in Mathematics, C. H. S.; 1899——, Assistant Professor in Mathematics, C. H. S.

† WILLIAM FRANCIS GRAY.

B. 9 May, 1866, Philadelphia.

1881–85, Pennsylvania Museum and School of Industrial Art; 1886–87, Teacher, Spring Garden Institute; 1888–92, Central Manual Training School; 1892——, Professor of Drawing, C. H. S.; 1900——, Head of Department of Art, C. H. S.

† WILLIAM HOUSTON GREENE, A.M., M.D.

B. 30 December, 1853, Columbia, Pa.

1870, A.B. (C. H. S.); 1873, M.D. (Jefferson Medical College); 1875, A.M. (C. H. S.); Assistant and Demonstrator in Chemistry, Jefferson Medical College; 1877–78, student under Adolf Wurtz, Paris; 1879–80, Demonstrator in Chemistry, Medical Department, Univ. of Pa.; 1880–92, Professor of Chemistry, C. H. S.; 1892——, Emeritus Professor, C. H. S.; 1892——, member of firm of Stephen Greene & Co., printers.

Translator of Wurtz's "Elements of Modern Chemistry;" Author of "A Hand-Book of Medical Chemistry;" American Editor of Bert's "First Steps in Scientific Knowledge;" Author of scientific articles and monographs.

† JOHN LOUIS HANEY, A.M., B.S., Ph.D.

B. 29 July, 1877, Philadelphia.

1895, A.B. (C. H. S.); 1900, A.M.; 1898, B.S. (Univ. of Pa.); 1898–99, scholar in English (Univ. of Pa.); 1899–1900, Fellow in English (Univ. of Pa.); 1901, Ph.D. (Univ. of Pa.); 1900, Instructor in English and History, C. H. S.

† LEWIS REIFSNEIDER HARLEY, A.M., Ph.D.

B. 16 August, 1866, Chester Co., Pa.

Studied at Hill School, Pottstown, and West Chester Normal School. 1892, Ph.B. (Illinois Wesleyan Univ.); 1892, P. G. course at Univ. of Pa.; 1892–96, Principal, North Wales High School; 1894, A.M. *honoris causa* (Dickinson); 1895, Ph.D. (Univ. of Pa.); 1896, Instructor in English and History, C. H. S.; 1899——, Assistant Professor of History, C. H. S.

Author of "A History of Public Education Association of Philadelphia," "Francis Lieber: his Life and Political Philosophy," "The Life of Charles Thomson," and other articles upon historical subjects.

* JOHN SEELY HART, A.B., LL.D.

B. 28 January, 1810, Stockbridge, Mass. D. 26 March, 1877, Philadelphia.

1830, A.B. (Princeton); 1848, LL.D. (Miami Univ.); taught, Natchez, Miss.; 1832, Tutor, Princeton; 1834, Adjunct Professor of Ancient Languages, Princeton; 1836–41, Edgehill School; 1842–58, Principal, C. H. S.; 1859–62, edited publications of Sunday-School Union; 1863–71, Principal, New Jersey State Normal School; 1872–74, Professor of Rhetoric and the English Language, Princeton.

1844, edited *Pennsylvania Common School Journal;* 1849–51, edited *Sartain's Magazine;* 1859, founded *The Sunday-School Times*, editor of same until 1871; Author of "Class Book of Poetry" and "Class Book of Prose," "Essay on the Life and Writings of Edmund Spenser," the philological volume of the reports of the Wilkes Exploring Expedition, "In the School-Room," "Manual of Composition and Rhetoric," "Manual of English Literature," "Manual of American Literature," "Short Course in English and American Literature," and other educational works.

* HENRY HARTSHORNE, A.M., M.D., LL.D.

B. 16 March, 1823, Philadelphia. D. 10 February, 1897, Tokio, Japan.

1839, A.B. (Haverford); 1845, M.D. (Univ. of Pa.); 1853, Professor of Institutes of Medicine, Philadelphia College of Medicine; 1858–59, travelled in Europe; 1862, Professor of Anatomy, Physiology, Natural History, and Hygiene, C. H. S.; 1862, Acting Assistant Surgeon, hospital service, U. S. A.; 1866, Professor of Hy-

giene, Univ. of Pa.; 1867–71, Professor of Organic Science and Philosophy; 1871–76, Professor of Physiology and Hygiene, Haverford College; 1884, LL.D. (Univ. of Pa.).

Author of "Essentials of Practical Medicine," "Conspectus of Medical Science," articles in "Johnson's Universal Cyclopædia," and several volumes of poems.

† William A. Haussman, A.B., Ph.D.

B. 4 May, 1870, Stuttgart, Germany.

1888, A.B. (C. H. S.); 1895, Ph.D. (Johns Hopkins Univ.); 1896, Instructor at Petersburg School, Va.; 1897, Burlington Academy; Instructor in Latin, Allegheny High School; 1901——, Instructor in German, C. H. S.

Author of "German-American Hymnology;" translator of Nietzsche's "Genealogy of Morals."

* Henry Haverstick, A.B.

B. 23 November, 1807, Lancaster, Pa. D. 20 January, 1884, Somerset, Pa.

1825, A.B. (Dickinson); 1826, Lutheran Theological Seminary, Gettysburg, Pa.; 1829–32, pastor of Lutheran church, Cumberland, Md.; 1832–35, travelled abroad; 1836, pastor of Lutheran churches, Somerset Co., Pa.; 1839, Principal of Academy in Carnesville, Ga.; 1842, Principal of Academy in Clarkesville, Ga.; 1844–66, Professor of Ancient Languages, C. H. S.; 1867–75, in Europe.

John Allen Heany, A.B.

B. April, 1876.

1895, A.B. (C. H. S.); 1895–98, Assistant in Physics and Mechanics, C. H. S.

† Cheesman Abiah Herrick, Ph.D.

B. 21 July, 1866, Redwood, N. Y.

1887–89, attended Illinois State Normal University; 1889–92, Principal of High Schools, Hopedale and Minier, Ill.; 1894, Ph.B. (Univ. of Pa.); 1895, Instructor in History, C. H. S.; 1898——, Professor of Industrial History and Political Economy and Head of Department of Commerce, C. H. S.; 1899, Ph.D. (Univ. of Pa.).

Author of "Commercial Education."

* Frederick Gottlieb Heyer, A.M., LL.B.

B. 10 November, 1829, Helmstadt, Prussia. D. 29 June, 1877. Philadelphia.

1846, A.B. (C. H. S.); 1851, A.M. (C. H. S.); 1853, LL.B. (Univ. of Pa.); 1846–51, Assistant Professor, C. H. S.; 1851–77, practised law, Philadelphia.

† James Miller Hill, A.M.

B. 18 August, 1863, Canonsburg, Pa.

1887, A.B. (Washington and Jefferson College); 1890, A.M. (Washington and Jefferson College); 1888–92, graduate student, Johns Hopkins University; 1892–93, Honorary Fellow in Greek, Univ. of Chicago; 1887–88, Instructor in Latin and Greek, Canandaigua High School, N. Y.; 1892–93, Instructor in Greek, Chicago Academy; 1893–95, Instructor in Latin, Indianapolis High School; 1895–96, Private School, Pittsburg; 1896–1900, Instructor in Latin and Greek, C. H. S.; 1900——, Assistant Professor of Latin and Greek, C. H. S.

† Jacob Farnum Holt, A.M., M.D.

B. 24 July, 1831, Greenfield, N. H.

Graduate Phillips's Academy, Andover, Mass. 1854–56, Teacher in grammar schools in Massachusetts; 1857, A.B. (Harvard); A.M. (Harvard); 1859, M.D. (Univ. of Pa.); 1859–66, Instructor, Polytechnic College in Philadelphia; 1862–65, Surgeon, U. S. A.; 1867——, Professor of Anatomy in C. H. S., and Head of Department of Biology since 1896.

† Zephaniah Hopper, A.M., Ph.D.

B. 19 September, 1824, Philadelphia.

1842–44, Assistant in elementary schools, Philadelphia; 1844–54, Principal of elementary schools, Philadelphia; 1850, A.M. (C. H. S.); 1854——, Professor of Mathematics (C. H. S.); 1869–97, Instructor, Artisans' Night School, and Principal of same, 1877–97; 1865–80, Superintendent of Examinations for Teachers' Certificates.

* John Stockton Hough, A.M., M.D.

B. 5 December, 1845, Yardley, Pa. D. 6 May, 1900, Yardley.

1867, graduated from Polytechnic College, Philadelphia; 1868, M.D. (Univ. of Pa.); 1868, Assistant in Experimental Chemistry, C. H. S.; 1870, Master of Chemistry, Polytechnic College.

Author of numerous papers on Biology, Speculative Physiology, Social Science, Vital Statistics, etc.; also compiler of a bibliography of medical literature.

† Edwin James Houston, A.M., Ph.D.

B. 9 July, 1844, Alexandria, Va.

1864, A.B. (C. H. S.); 1865, Prefect of Girard College; 1867–94, Professor of Physical Geography and Natural Philosophy, C. H. S.; 1894——, Emeritus Professor, C. H. S.; 1869, A.M. (C. H. S.); 1884, Engineer of International Electrical Exposition; 1893, Ph.D. *honoris causa* (Princeton); Librarian of Associated Alumni, C. H. S.

Editor of *Journal of Franklin Institute;*" author of "New Physical Geography," "Elements of Natural Philosophy," "Outlines of Forestry," and the "Encyclopædic Electrical Dictionary." Also, in collaboration with A. E. Kennelly, "Recent Types of Dynamo-Electric Machinery," and a number of other books upon electricity in the "Electro-Technical Series." Also the author of many short articles and pamphlets upon electricity and kindred subjects.

Daniel Waldo Howard, A.M.

B. 20 July, 1829, Worcester, Mass.

1849, graduated from C. H. S.; 1849–50, Teacher, Haddington School; 1850–51, Union School, Upper Darby; 1851–63, Assistant, C. H. S.; 1854, A.M. (C. H. S.); 1863–86, Professor of History, C. H. S.

† Arthur Wellesley Howes, A.B.

B. 11 March, 1870, Philadelphia.

1884–85, student, C. H. S.; 1893, A.B. (Univ. of Pa.); 1893–95, Department of Philosophy, Univ. of Pa.; 1895–96, Instructor in Latin and Greek, C. H. S.; 1896–99, Assistant Professor, C. H. S.; 1900——, Professor, C. H. S.

HENRY CLARK JOHNSON, A.M., LL.B.

B. 11 June, 1851, Homer, N. Y.

1867–69, Yale Law School; 1869–73, A.B. (Cornell); 1875, LL.B. (Hamilton College); 1875–77, Head Master, Ury School, Philadelphia; 1877–79, St. Paul's School, Garden City, Long Island; 1879–81, Principal of City High and Normal Schools, Paterson, N. J.; 1881–88, Professor of Latin Language and Literature, Lehigh Univ., Bethlehem, Pa.; 1887, A.M. *honoris causa* (Hobart College); 1888–93, President, C. H. S.; 1893——, practised law, New York.

† HARRY FREDERICK KELLER, B.S., Ph.D.

B. 15 December, 1861, Philadelphia.

Elementary training in Gymnasium at Darmstadt, Germany. 1881, B.S. (Univ. of Pa.); 1883–86, Assistant in Analytical Chemistry, (Univ. of Pa.); 1888, Ph.D. (Strassburg); 1888–90, Instructor in Organic and General Chemistry, Univ. of Pa.; 1890–92, Professor of Chemistry and Assaying, Michigan College of Mines, Houghton, Mich.; 1892——, Professor of Chemistry, C. H. S.; 1895——, Head of Department of Physical Science, C. H. S.

Editor of Wurtz and Greene's "Chemistry;" with E. F. Smith, "Experiments in Chemistry;" numerous scientific articles in journals, etc.

* EZRA OTIS KENDALL, LL.D.

B. 15 May, 1818, Wilmington, Mass. D. 5 January, 1899, Philadelphia.

Graduate of Boston Latin School. 1836–38, taught in private schools; 1838, Professor of Theoretical Mathematics and Astronomy, C. H. S.; 1855–95, Professor of Mathematics and Astronomy, Univ. of Pa.; 1888, LL.D. (Univ. of Pa.); 1895, Emeritus Professor.

Author of "Uranography;" edited Gummere's "Astronomy;" 1851, assisted in compiling "United States Nautical Almanac."

* JOHN KERN.

B. 1807, Philadelphia. D. 25 March, 1886, Philadelphia.

1846–66, Teacher of Drawing, Franklin Institute and Friends' School, Philadelphia, Pa.; November, 1866–86, Professor of Drawing, C. H. S.

* James Adams Kirkpatrick, A.M.

B. 7 October, 1824, County Donegal, Ireland. D. 3 June, 1886, Philadelphia.

1832, came to America; 1842, graduated from C. H. S.; 1843–51, Assistant, C. H. S.; 1851–68, Professor of Civil Engineering and Phonography, C. H. S.; 1871–80, Assistant to Superintendent Smith of Girard Estate; 1880, elected Superintendent, and held that position till January, 1886.

† Benjamin Franklin Lacy, A.M., B.S.

B. 29 January, 1866, Warren, Pa.

1884, A.B. (C. H. S.); 1889, A.M. (C. H. S.); 1889, B.S. (Univ. of Pa.); 1890–94, Assistant in C. H. S.; 1891, Professor of Psychology, School of Pedagogy; 1894——, Professor of Physics and Physical Geography, C. H. S.

Author of various articles in scientific journals.

† Ernest Lacy.

Studied at Hastings Academy and under private tutors. 1893–96, Instructor in Composition and Elocution, C. H. S.; 1896–99, Assistant Professor of English Language and Literature; 1900——, Professor of English Language and Literature, C. H. S.

Author of "Plays and Sonnets."

† Edward Horace Landis, B.S.

B. 16 November, 1876, Reading, Pa.

Studied at Northeast Manual Training School, Philadelphia. 1898, B.S. in E.E. (Univ. of Pa.); 1898——, Instructor in Physics and Chemistry, C. H. S.

† Francis Herbert Lee, A.B.

B. 10 July, 1872, Philadelphia.

1893, A.B. (Univ. of Pa.); 1893–95, stock broker; 1895–1900, Professor of Greek and Latin, and Head of Classical Department, Temple College, Philadelphia; 1896——, Department of Philosophy, Univ. of Pa.; 1900——, Instructor in Latin and History, C. H. S.

HENRY LEFFMANN, A.M., M.D., D.D.S., Ph.D.

B. 9 September, 1847, Philadelphia.

1865, A.B. (C. H. S.); 1869, M.D. (Jefferson Medical College); 1873——, Professor of Chemistry, Wagner Institute; 1874, Ph.D. *honoris causa* (Wagner Institute); 1875–83, Lecturer on Toxicology, Jefferson Medical College; 1876–80, Assistant Professor of Chemistry, C. H. S.; 1884, D.D.S. (Pa. Coll. Dent. Surg.); 1884–87, Port Physician of Philadelphia, also from 1891–92; 1890–94, Chemist to State Board of Health of Pennsylvania and to Dairy and Food Commissioner; 1894, A.M. (C. H. S.); Professor of Chemistry at Philadelphia Polyclinic, Pennsylvania College of Dental Surgery, and Woman's Medical College of Pennsylvania.

Author of "Elements of Chemistry," "Analysis of Milk and Milk Products," "Sanitary Relations of the Coal-Tar Colors" from the German of Th. Weyl, and "Structural Formulæ." Also author and editor of many other scientific works.

EDWIN LEIBFREED, A.M., Ph.D.

B. 22 December, 1865, Philadelphia.

1884, A.B. (C. H. S.); 1889, A.M. (C. H. S.); studied at Univ. of Pa.; 1888–93, taught at Peirce School, Philadelphia; 1890 and 1895, studied economics at Leipsic and Dresden (Summer Course); 1893–98, Professor, Drexel Institute, Philadelphia, 1899–1900, Instructor, C. H. S.; 1900, Ph.D. (Rutherford College).

† THOMAS MONTGOMERY LIGHTFOOT, M.S., Ph.D.

B. 15 December, 1865, Germantown, Pa.

1884–88, B.S. (Swarthmore College); 1889, certificate in Biology (Univ. of Pa.); 1890, M.S. (Swarthmore College); 1893, Ph.D. (Univ. of Pa.); 1891–92, Student Assistant in Geology and Mineralogy, Univ. of Pa.; 1893–94, Instructor, Boys' High School, Reading, Pa.; 1894–1900, Instructor in Physics, C. H. S.; 1900——, Assistant Professor in Physical Science, C. H. S.

† WILLIAM JOHN LONG, A.M.

B. 10 March, 1873, Philadelphia.

February, 1891, A.B. (C. H. S.); 1896, A.M. (C. H. S.); 1896–1900, Assistant to the President of C. H. S.; 1898——, graduate student in Romance Languages, Univ. of Pa.; 1900, Instructor in Romance Languages and Literature, C. H. S.

ROMAIN LUJEANE.

B. in Italy.

Studied in Vienna; lived some years in Germany. 1859–60, Professor of German, C. H. S.; Lieutenant-Colonel 99th Pennsylvania Volunteers; resigned 1861.

* JAMES LYND, A.M.

B. 1820, Philadelphia. D. 30 June, 1876, Philadelphia.

1845, graduated from C. H. S.; 1845–46, Assistant, C. H. S.; Professor of Belles-Lettres, Newark, Del.; 1849, admitted to Philadelphia Bar; 1862, Select Council, from 13th Ward; 1863–66, President of same; 1866–68, City Solicitor, Philadelphia; 1870–76, Judge of Court of Common Pleas, No. 3.

Author of "First Book of Etymology," "Class-Book of Etymology," and "Key to Oswald's Etymological Dictionary of the English Language."

† PHILIP MAAS.

B. 5 July, 1872, Philadelphia.

1890, graduated at Central Manual Training School; 1892–94, Univ. of Pa.; 1894–99, Instructor in Chemistry, C. H. S.; 1899——, Assistant Professor in Chemistry, C. H. S.

Published "Some Niobium and Tantalum Compounds" (with Dr. E. F. Smith, Univ. of Pa.), "Atomic Weight of Molybdenum" (with Dr. E. F. Smith, Univ. of Pa.), "Method of Determining Sulphur in Roasted Sulphide Ores," and other scientific articles with Dr. H. F. Keller, C. H. S.

* ALEXANDER JAY MACNEILL, A.M.

B. May, 1832. D. 25 October, 1862, Philadelphia.

1848, graduated from C. H. S.; 1852–53, Assistant in C. H. S.; 1853–62, Professor of Drawing, Writing, and Bookkeeping, C. H. S.; resigned to accept a commission in the navy.

* Nicholas Harper Maguire, A.M.

B. 21 September, 1814, Burlington, N. J. D. 29 June, 1899, Philadelphia.

1833, graduated with A.M. from St. Mary's College, Maryland; taught in private schools; 1835, Professor of Belles-Lettres, Laurel High College; 1842, Principal of Coates Street (now Hancock) School; 1858–66, Principal of C. H. S.; 1870–94, Principal of Horace Binney Combined School; 1894–99, retired from teaching.

William Albert Mason.

B. 25 December, 1854, Cambridge, Mass.

Graduate of Massachusetts Institute of Technology; graduated as "Art Master" from Massachusetts Normal Art School, Boston. 1876–77, Teacher of Art in Massachusetts Normal Art School; 1877–78, Supervisor of Drawing in Worcester Schools; 1880–83, Director of the Art Department of Ohio State University; 1883–87, Vice-Principal, Pennsylvania Museum and School of Industrial Art; 1887–92, Professor of Drawing, C. H. S.; 1892——, Director of Drawing of Philadelphia Public Schools.

Bernard Maurice, A.M., LL.D.

B. 12 February, 1837.

Studied at College of Yonne; A.M. and LL.D. (Univ. of Paris); 1861–62, taught at N. Y. High School; 1862–65, at Mt. St. Mary's College, Md.; 1865–72, at the U. S. Naval Academy; 1890–98, Instructor in French, C. H. S.; 1899, Professor of French, C. H. S.

Author of "La Grammaire en Action," "Double Entry and its Philosophy."

* James McClune, A.M., LL.D.

B. 1818. D. 1 May, 1890, Philadelphia.

1835, A.B. (Princeton); 1836–54, taught in schools in Union and Chester Counties, Pa.; Principal, Harrison Grammar School, Philadelphia; 1855–77, Professor Higher Mathematics and Astronomy in C. H. S.

Author of astronomical reports on the comet of 1858, the November meteors of 1867, eclipse of 1869, solar spots of 1870, etc. Also of "A History of the Presbyterian Church in the Forks of the Brandywine."

† Henry Bulkley McIntire.

B. 10 October, 1872, Philadelphia.

Studied at Pennsylvania Museum and School of Industrial Art; 1897–1901, Instructor in Drawing, C. H. S.

* Henry McMurtrie, M.D.

B. 1793, Philadelphia. D. 26 May, 1865.

1814, M.D. (Univ. of Pa.); 1839–61, Professor of Anatomy and Physiology, C. H. S.

Author of many text-books on Anatomy; also a translation (the first in English) of Cuvier's "Animal Kingdom;" "Lexicon Scientiarum."

Samuel Mecutchen, A.M.

B. 7 March, 1827, County Tyrone, Ireland.

1842, graduated, C. H. S.; A.M. (C. H. S.); 1860–61, Teacher, Oakdale Unclassified School; 1862–63, Kingsessing Boys' Unclassified School; 1864–69, Washington Boys' Grammar (G. W. Nebinger School); 1877–81, Professor of Higher Arithmetic, Commercial Calculations, and Mensuration, C. H. S.

Author of "New American Arithmetics and Spellers," "Graded Problems in Arithmetics and Mensuration." Compiled Butler's Readers and most of the material for Harper's 1st, 2d, 3d, and 4th Readers, also a Pocket Atlas of the World.

* William Newton Meeks, A.M.

B. November, 1848. D. 19 November, 1878, Philadelphia.

1867, A.B. (C. H. S.); Professor of Mathematics, Episcopal Academy, Philadelphia; 1868, U. S. Coast Survey; 1878, Professor of Belles-Lettres and Elocution, C. H. S.

† John Mather Miller, A.M.

B. 30 July, 1861, Philadelphia.

1879, A.B. (C. H. S.); 1884, A.M. (C. H. S.); 1880–84, Assistant and Principal in elementary schools in Philadelphia; 1888–94, Instructor in English, C. H. S.; 1894–1900, Assistant Professor in English Language and Literature, C. H. S.; 1900——, Assistant Professor of Latin, C. H. S.

† Benjamin Wiestling Mitchell, A.M., Ph.D.

B. 24 March, 1861, Harrisburg, Pa.

'1883, A.B. (Princeton); 1886, A.M. (Princeton); 1889, Ph.D. (Washington and Jefferson College); 1885–97, East Liberty Academy, Pittsburg, Pa.; 1897——, Professor of Latin and Head of the Department of Ancient and Modern Languages, C. H. S.

Author of "The Essentials of Latin."

† James Hugh Fleming Moffatt, A.B.

B. 10 September, 1878, Cumberland, Md.

1900, A.B. (Princeton); 1900——, Instructor in English and History, C. H. S.

Managing editor *Nassau Literary Magazine;* editor of "A History of Athletics at Princeton."

† John Stokes Morris, A.M.

B. 24 June, 1873, Moorestown, N. J.

1891, B.S., and 1892, A.M. (Haverford); 1892–96, studied at Johns Hopkins University; 1896–1900, Instructor in Mathematics, C. H. S.; 1900——, Assistant Professor of Mathematics, C. H. S.

Andrew J. Morrison, Ph.D.

B. 14 February, 1844, Bucks County, Pa.

Studied at elementary schools, C. H. S., and Tennent Academy. To 1881, Assistant and Principal in various elementary schools; 1881–83, Professor of Mathematics, C. H. S.; 1883–98, Assistant Superintendent of Schools, Philadelphia; 1898——, Principal of Northeast Manual Training School; 1901, Ph.D. (Cedarville College).

† Percy Landreth Neel, A.B., B.S.

B. 19 October, 1876, Philadelphia.

1893, A.B. (C. H. S.); 1897, B.S. in M.E. (Univ. of Pa.); 1897——, Instructor in Chemistry and Physics, C. H. S.

† Julius Lederer Neufeld, A.B., E.E.

B. 26 April, 1872, Vienna, Austria.

1891, A.B. (C. H. S.); 1894, E.E. (Lehigh); 1894–99, Instructor in Mathematics and Drawing, C. H. S.; 1899——, Assistant Professor of Mathematics and Drawing, C. H. S.

* JOHN SEARCH NEWTON, M.D., Ph.G.

B. 29 May, 1842, Philadelphia. D. 18 August, 1894.

1866, graduated from Philadelphia College of Pharmacy; 1868–70, Assistant in Chemistry, C. H. S.; 1870, M.D. (Jefferson); 1877, State Medical Director of Georgia, Alabama, and Florida.

ISAAC NORRIS, A.M., M.D.

B. 12 June, 1834, Philadelphia.

1852, A.B. (Univ. of Pa.); 1855, A.M. (Univ. of Pa.); 1855, M.D. (Univ. of Pa.); 1866–76, Professor of Physics and Chemistry, C. H. S.

† LOUIS NUSBAUM, A.B., Ph.B.

B. 7 April, 1877, Philadelphia.

1893, A.B. (C. H. S.); 1893–94, School of Pedagogy; 1899, Ph.B. (Illinois Wesleyan Univ.); 1895, Northern Liberties Night School; 1895–1900, Assistant, James G. Blaine School; 1900——, Critic Teacher, Department of Pedagogy, C. H. S.

Author of "A Hundred Songs for Public Schools." 1899——, Associate editor of *The Teacher.*

† HENRY W. PATTEN, Ph.B.

B. 14 June, 1860, Greenwich, Conn.

1882, Connecticut Normal School; 1886, Ph.B. (Yale); 1900, Rochester (N. Y.) Business Institute; 1887–88, Leals School, Plainfield, N. J.; 1889–93, University School, Chicago; 1896–1900, Genesee State Normal School (N. Y.); 1900——, Instructor in Bookkeeping and Business Practice, C. H. S.

† JESSE PAWLING, JR., A.M., B.S.

B. 29 October, 1865, Overbrook, Pa.

1888, A.B. (C. H. S.); 1893, A.M. (C. H. S.); 1893, B.S. (Cornell); 1894, graduate student, Cornell; 1894–95, Columbian University; 1895–96, Johns Hopkins University; 1890, Teacher, Rugby Academy; 1894–96, Nautical Almanac Office, Computer; 1895, U. S. Coast and Geodetic Survey; 1887–96, Private Tutor, Mathematics; 1896——, Instructor in Physics, C. H. S.

* Rembrandt Peale.

B. 22 February, 1778, Bucks County, Pa. D. 3 October, 1860, Philadelphia.

1801–03, studied under Benjamin West, in London; 1807–09, Art Galleries of Paris; 1827, removed to Philadelphia; 1840–44, Professor in C. H. S.

Author of "An Account of the Skeleton of the Mammoth," "Historical Disquisition on the Mammoth," "Notes on Italy," "Graphics," "Reminiscence of Art and Artists." Edited "Portfolio of an Artist."

† George Lewis Plitt, A.M.

B. 8 January, 1861, Phillipsburg, N. J.

1882, A.B. (Univ. of Pa.); 1892, A.M. (Univ. of Pa.); 1884–85, Teacher, Rugby Academy; 1885–87, Teacher, The Forsythe School; 1887–97, Teacher Martin's School; 1897–1900, Instructor in Latin and Greek, C. H. S.; 1900——, Assistant Professor in Latin and Greek, C. H. S.

* Benjamin Howard Rand, A.M., M.D.

B. 1 October, 1827, Philadelphia. D. 14 February, 1883, Philadelphia.

1848, M.D. (Jefferson); 1850, A.M. (C. H. S.); 1850, Professor of Chemistry, Franklin Institute; 1853–64, Professor of Chemistry, Philadelphia Medical College; 1859–64, Professor of Chemistry, C. H. S.; 1864–77, Professor of Chemistry, Jefferson Medical College.

1859, edited 3d edition Dr. S. L. Metcalf's "Caloric: its Agencies on the Phenomena of Nature." Author of "An Outline of Medical Chemistry" and "Elements of Medical Chemistry."

† Alfred Zantzinger Reed, A.M.

B. 31 January, 1875, Colorado Springs, Col.

1897, A.B. (Harvard); 1898, A.M. (Harvard); 1897–98, Teacher, Belmont School, Belmont, Mass.; 1898——, Instructor in Latin and Pedagogy, C. H. S.

* James Rhoads, A.M.

B. 1 April, 1811, Haddington. D. 3 May, 1886, Philadelphia. Educated at Friends' schools in Philadelphia and Westtown, and at Merion Academy. 1832–35, mercantile pursuits; 1835–45, Assistant and Principal in elementary schools of Darby and Philadelphia; 1845–78, Professor of History, Belles-Lettres, and Elocution in C. H. S.

George Inman Riché, A.M.

B. 21 January, 1833, Philadelphia.

1851, A.B. (C. H. S.); 1854, admitted to Philadelphia Bar; 1856, A.M. (C. H. S.); 1860–62, member of Board of School Controllers; 1864, Paymaster, U. S. army; 1864–67, member of Common Council, Philadelphia; 1866–86, President, C. H. S.

* Jacob Guyon Hibbs Ring, Jr., A.M.

B. 6 March, 1838, Philadelphia. D. 1 October, 1878, Carlisle, Pa.

1856, A.B. (C. H. S.); 1861, A.M. (C. H. S.); 1856–59, taught at Chester and Carlisle; 1859–63, Assistant, C. H. S.; 1863–66, Professor of Latin, C. H. S.; 1866–78, in business.

* Frederick A. Roese.

B. 17 April, 1807, Lubeck, Holstein. D. 17 October, 1867, Philadelphia.

1846, came to America; 1854–56, Professor of German, C. H. S.; 1856, Teacher of private classes.

† Jonathan Taylor Rorer, Jr., A.M., Ph.D.

B. 21 August, 1871, West Chester, Pa.

1889, A.B. (C. H. S.); 1894, A.M. (C. H. S.); 1890–92, Haverford College; 1894–95, Colorado College; 1895, A.B. (Colorado College); 1896–1900, graduate student in Astronomy and Mathematics, Univ. of Pa.; 1901, Ph.D. (Univ. of Pa.); 1894–95, Instructor in English and Mathematics, Colorado College; 1895–1900, Instructor in Mathematics, C. H. S.; 1900——, Assistant Professor of Mathematics, C. H. S.

* JOHN SANDERSON.

B. 1783, near Carlisle, Pa. D. 5 April, 1844, Philadelphia.

1806, studied law, Philadelphia; Associate Principal, Clermont Seminary; 1840–44, Professor of Latin and Greek, C. H. S.

Author of "Biography of the Signers of the Declaration of Independence" (in connection with his brother, J. H. Sanderson); 1838, "Sketches of Paris" (republished in London as "The American in Paris") and "The American in London."

WILLIAM L. SAYRE.

B. 24 April, 1840, Philadelphia.

Educated in Philadelphia elementary schools and C. H. S. 1857, Teacher in Bucks County, Pa.; 1863–1885, Teacher and Principal in elementary schools, Philadelphia; 1885, Vice-Principal, Central Manual Training School; 1886, Professor of Drawing, C. H. S.; 1887——, Principal of Central Manual Training School, Philadelphia.

* HENRY SAYLOR SCHELL, A.M., M.D.

B. 1 June, 1835. D. 15 March, 1890.

1853, A.B. (C. H. S.); 1853–54, Assistant in C. H. S.; 1857, graduated from Medical Department, Univ. of Pa.

† ELLIS ANSTETT SCHNABEL, A.M.

B. 3 May, 1870, Bethlehem, Pa.

1891, A.B. (Lehigh); 1893, A.M. (Lehigh); 1891–97, Instructor in Latin and Greek, C. H. S.; 1897–99, Assistant Professor of Latin and Greek, C. H. S.; 1899——, Professor of Latin and Greek, C. H. S.

† GEORGE WASHINGTON SCHOCK, A.M., Sc.D.

B. 4 August, 1825, Montgomery Co., Pa.

1845–75, Assistant and Principal in elementary schools, Philadelphia and Montgomery Co.; 1874, A.M. *honoris causa* (Princeton); 1875——, Professor of Higher Mathematics, C. H. S.; 1895, Sc.D. *honoris causa* (C. H. S.).

† GEORGE WASHINGTON SCHWARTZ, A.M., Ph.B.

B. 10 June, 1858, Philadelphia.

Partial Course, C. H. S. 1883, Ph.B.; 1886, A.M. (Dickinson College); 1883–92, taught at Mount Holly Academy; 1893–96, Temple College, Philadelphia; 1896–97, Ashbourne High School, Pa.; 1897——, Instructor in German, C. H. S.

* OLIVER ABBOTT SHAW.

B. May, 1799, Lexington, Mass. D. 4 April, 1855, Yazoo City, Miss.

1821, graduated from Yale College; 1822, Teacher, Jamaica, L. I.; 1823–24, studied law in New Haven; 1825–33, Teacher in Richmond, Va.; 1834, taught in Philadelphia; 1841–43, Professor in C. H. S. After leaving C. H. S. studied for ministry and took orders in the Episcopal Church.

* ELVIN KEYSER SMITH.

B. April, 1826. D. 25 March, 1900, at Lambertville, N. J.

1840, graduated from C. H. S.; 1843–44, Assistant in C. H. S.; afterwards was ordained in the Episcopal Church.

† ALBERT HENRY SMYTH.

B. 18 June, 1863, Philadelphia.

1882, A.B. (C. H. S.); 1886, A.B. *honoris causa* (J. H. U.); 1886——, Professor of the English Language and Literature, C. H. S.; 1893——, Head of Department of the English Language and Literature, C. H. S.

Editor of "Shakespeariana;" author of "American Literature," "The Philadelphia Magazines and their Contributors," "Bayard Taylor," and "Shakespeare's Pericles and Apollonius of Tyre." Also editor of various literary texts.

† MONROE BENJAMIN SNYDER, A.M.

B. 13 March, 1848, near Quakertown, Pa.

1866–68, Pennsylvania College; 1872, A.B. (Univ. of Mich.); 1875, A.M. (Univ. of Mich.); 1873–80, Adjunct in Higher Mathematics and Astronomy, C. H. S.; 1880——, Professor of Astronomy and Applied Mathematics, C. H. S.; 1896——, Head of Department

of Mathematics, C. H. S.; 1897——, Director of Philadelphia Observatory.

Editor of "The Report of the U. S. Electrical Conference;" author of "The Establishment of a National Bureau of Physical Standards;" "Survivals of Astrology;" also of astronomical contributions in national and scientific publications.

† JOHN DUNCAN SPAETH, A.B., Ph.D.

B. 27 September, 1868, Philadelphia.

1888, A.B. (Univ. of Pa.); 1888–90, Lutheran Theological Seminary, Philadelphia; 1893, Ph.D. (Leipsic); 1893–94, Professor of the English Language and Literature, Gustavus Adolphus College, St. Peter, Minn.; 1894–96, Instructor in History, Latin, and English Literature, C. H. S.; 1896——, Professor of English Philology, C. H. S.

Author of "Syntax of the Anglo-Saxon Poem 'Daniel;'" "Christian Theology in Browning's Poetry."

* LEMUEL STEPHENS.

B. 1815(?). D. 28 March, 1892, Philadelphia.

1835, graduate of Harvard; 1835–39, taught in Pittsburg; 1840–43, studied at Universities of Göttingen and Berlin; 1843–50, Professor of Chemistry, Western Univ. of Pa.; 1850–65, Professor of Chemistry, Girard College; 1865–66, Professor of Chemistry and Physics, C. H. S.

† MAX STRAUBE.

B. at Erfurt, Prussia.

Educated at Universities of Leipzig and Heidelberg. 1865, admitted to practice at Philadelphia Bar; taught in Seminary in Virginia and in High School of Sacramento, Cal.; 1874——, Professor of German at C. H. S.

* DANIEL STROCK, A.M.

B. 20 November, 1824. D. 18 October, 1850.

1844, graduated (C. H. S.); 1850, A.M. (C. H. S.); 1844–45, Assistant, C. H. S.; 1845, taught at New London Cross Roads.

* George Stuart, A.M.

B. August, 1831. D. 16 March, 1897, Philadelphia.

1852, A.B. (C. H. S.); 1853–56, Assistant, C. H. S.; 1856–58, Tutor, Latin and Greek, Haverford College; 1857, A.M. (C. H. S.); 1859–62, Professor of English, Girard College; 1862–66, Principal of Grammar School; 1866–97, Professor of Latin, C. H. S.; 1894–97, Head of Department of Ancient and Modern Languages, C. H. S.

Co-editor of "Chase and Stuart's Series of Latin Texts" and author of "The Raison d'Être of the Public High School."

* Franklin Taylor.

B. 22 January, 1818, Kennett Square, Pa. D. 16 April, 1890, Philadelphia.

Attended Harvard University two years, and Heidelberg University, Germany. Travelled extensively in Europe and Asia. Superintendent of Schools, Chester Co. 1872–75, Professor of Natural Sciences, West Chester Normal School; 1875–78, Teacher in Martin Academy, Kennett Square, and private schools; 1878–86, Professor of English Literature, C. H. S; 1886–88, President, C. H. S.; President of Baltimore Central Railroad; Collector of Internal Revenue.

† Robert Ellis Thompson, A.M., S.T.D.

B. 5 April, 1844, near Lurgan, Ireland.

1859, entered C. H. S.; 1865, A.B. (Univ. of Pa.); 1866, Reformed Presbyterian Theological Seminary; 1868, A.M. (Univ. of Pa.); 1868–70, Instructor in Latin and Mathematics, Univ. of Pa.; 1870–71, Instructor in History; 1871–83, Professor of Social Science; 1883–92, John Welsh Professor of History and English Literature, Univ. of Pa.; 1885, Lecturer on "Protective Tariff," Harvard; 1886–87, Lecturer on "Protection to Home Industry," Yale; 1892——, Professor of History, Literature, and Economics, Wagner Institute; 1894——, President and Professor of Ethical and Political Science, C. H. S.

Published "Social Science and National Economy," "Elements of Political Economy," "The Divine Order of Human Society," "The History of the Presbyterian Churches of the United States," "Political Economy for High Schools and Academies," "Protection to Home Industry."

1870–80, editor of *The Penn Monthly;*" 1880–91, editor of *The American.*

ELIHU THOMSON, A.M.

B. 29 March, 1853, Manchester, Eng.

1870, A.B. (C. H. S.); 1875, A.M. (C. H. S.); 1870–76, Assistant, C. H. S.; 1876–80, Professor of Chemistry and Physics; 1875, Professor of Chemistry, Artisans' Night School; 1876–77, lectured on "Electricity," Franklin Institute; 1880——, Electrician to the General Electric Company.

Author of nearly two hundred inventions relating to arc lighting, incandescent lighting, motor work induction systems, and similar applications; inventor of a system of electric welding, etc.

FRANCIS NEWTON THORPE, Ph.D.

B. 16 April, 1857, Swampscott, Mass.

1883, Ph.D. (Syracuse Univ.); 1885, admitted to the bar; 1885–98, Fellow and Professor of American Constitutional History, Univ. of Pa.; 1886, Substitute Professor of History and Literature, C. H. S.

Author of "The Government of the People of the United States," "Benjamin Franklin and the University of Pennsylvania," "A Constitutional History of the American People," "The Constitutional History of the United States," "A History of the American People," "The Life of William Pepper, M.D., LL.D.," etc.

* WILLIAM CROZIER TODD, A.M.

B. 12 April, 1859, Philadelphia. D. 30 December, 1888.

1879, A.B. (C. H. S.); 1884, A.M. (C. H. S.); 1887–88, Substitute Teacher of Geometry, C. H. S.

* EDWARD WILLIAM VOGDES, A.M., M.D.

B. 27 August, 1830, Philadelphia. D. 18 October, 1887, Philadelphia.

1848, graduated from C. H. S.; 1851, M.D. (Univ. of Pa.); 1854–58, Assistant, C. H. S.; 1858–80, Professor of Moral, Mental, and Political Science; 1880–87, Professor of Belles-Lettres and Elocution, C. H. S.

* William Vogdes.

B. 29 December, 1802, Philadelphia. D. 29 January, 1886.

1832, admitted to Philadelphia Bar; 1834–38, Auditor of Philadelphia County; 1838–61, Professor of Mathematics, C. H. S.

Published "United States Arithmetic" and "Elementary Treatise on Mensuration and Practical Arithmetic."

William Henry Wahl.

B. 14 December, 1848, Philadelphia.

1860–63, studied at C. H. S.; 1867, A.B. (Dickinson); 1869, A.M., Ph.D. (University of Heidelberg); 1870–76, Lecturer at Franklin Institute; 1872–73, Substitute at C. H. S.; 1874–80, Lecturer at Wagner Institute; Secretary of Franklin Institute.

Author of "Galvanoplastic Manipulation," "Constructive Arts;" translator of Karl's "Manual of Assaying;" editor of *Journal of Franklin Institute,* etc.

† John Charles Walker, Ph.D.

B. 31 August, 1864, North Ridgeway, N. Y.

1892, Ph.B. (Cornell); 1898, Ph.D. (Cornell); 1893, 1896–97, Univ. of Paris; 1894–95, Johns Hopkins Univ.; 1897, Madrid.

1887–88, Teacher in Mathematics, Starkey Seminary; 1893–94, Instructor in French, Univ. of Iowa; 1898–99, Instructor in French, Cascadilla School, Ithaca, N. Y.; 1899——, Professor of the Romance Languages, C. H. S.

Emile Walliser, A.B.

B. 22 December, 1876, Philadelphia.

1897, A.B. (C. H. S.); Philadelphia School of Pedagogy; postgraduate course in German, Univ. of Pa.; 1899–1900, Teacher in Public Night School; 1900–1901, Instructor in German, C. H. S.

Ulysses Grant Weatherly, A.B., Ph.D.

B. 21 April, 1865, Indianapolis, Ind.

1890, A.B. (Colgate Univ., N. Y.); 1890–91, Principal Marathon Regents Academy, N. Y.; 1891–93, graduate work in History and Political Science, Cornell Univ.; 1893–94, Fellow in Modern History, Cornell, studying at Heidelberg and Leipzig Universities; 1894, Ph.D. (Cornell); 1895, February to June, Substitute in His-

tory, C. H. S.; 1895——, Professor of History and Economics, Indiana University.

Author of "Evolution as related to Historical Study," "Lichtenstein, a Miniature European State," and other historical essays.

William Weinrich, Jr.

1898–1900, Laboratory Assistant in Applied Mathematics, C. H. S.; 1900——, United States Coast and Geodetic Survey.

* Joseph Wharton, A.M.

B. March, 1812, Philadelphia. D. 30 August, 1838, Philadelphia.

1826, entered Univ. of Pa.; 1838, elected Professor, C. H. S., but did not enter on active duties.

William Henry Williams, A.M., M.D.

B. April, 1840.

Graduated with Thirtieth Class, C. H. S. 1858–59, Assistant, C. H. S.; studied law with Benjamin Gerhard, Esq., and admitted to the Bar about 1861; 1862, A.M. (C. H. S.)

† Henry Willis, A.M.

B. 21 January, 1852, Philadelphia.

1870, A.B. (C. H. S.); 1871–86, Instructor in English Classics and Mathematics at West Penn Square Academy and at Dr. Faires's Academy, Philadelphia; 1886——, Professor of History, C. H. S.; 1895——, Head of Department of History, C. H. S.

* Joseph Washington Wilson, A.M.

B. 22 February, 1838, Philadelphia. D. 21 February, 1880.

1855, A.B. (C. H. S.); taught at Episcopal Academy, Philadelphia, and in Germantown; Principal of Norristown High School; 1861, A.M. (C. H. S.); 1862–78, Professor of Mathematics, C. H. S.; 1878–80, Professor of English Literature, C. H. S.

Author of "An Elementary Algebra."

* Enoch Cobb Wines, A.M., D.D., LL.D.

B. 17 February, 1806, Hanover, N. J. D. 10 December, 1879, Cambridge, Mass.

1827, graduated at Middlebury; 1829, Teacher of midshipmen, U. S. navy; 1832, Edgehill School, Princeton, N. J.; 1838–41, Professor in C. H. S., subsequently purchased a Classical School at Burlington, N. J.; 1853, D.D. (Middlebury); 1853, chair of Ancient Languages, Washington College, Pa.; 1857, LL.D. (Washington); 1859, President, City University, St. Louis, Mo.; 1878, Honorary President of International Penitentiary Congress at Stockholm.

Author of "Two Years and a Half in the Navy," "A Trip to China," "Hints on Popular Education," "How shall I govern my School?" "Commentaries on the Laws of the Hebrews," "Adam and Christ," "Historical and Farewell Discourses," "Treatise on Regeneration," "The True Penitent," "An Essay on Temptation," "The Prisons and Reformatories of the United States and Canada," "The Promises of God," "State of Prisons and Child-Saving Institutions."

APPENDIX C

RECORD OF COMMENCEMENTS.

Date.	Place.	Certificates.
July 15, 1842.	Juniper Street School.....	25 Full Course. 1 Partial Course.
Dec. 24, 1842.	" " "	3 Partial Course.
July 15, 1843.	" " "	7 Partial Course.
Dec. 22, 1843.	" " "	22 Full Course. 18 Partial Course.
July 13, 1844.	" " "	16 Full Course. 13 Partial Course.
Feb. 6, 1845.	" " "	12 Full Course. 18 Partial Course.
July 15, 1845.	" " "	16 Full Course. 20 Partial Course.
Feb. 12, 1846.	" " "	18 Full Course. 29 Partial Course.
July 15, 1846.	" " "	19 Full Course. 17 Partial Course.
Feb. 11, 1847.	" " "	11 Full Course. 32 Partial Course.
July 22, 1847.	" " "	14 Full Course. 31 Partial Course.
Feb. 17, 1848.	Musical Fund Hall	20 Full Course. 27 Partial Course.
July 20, 1848.	Chinese Museum	16 Full Course. 40 Partial Course.
Feb. 15, 1849.	Musical Fund Hall	18 Full Course. 36 Partial Course.
July 19, 1849.	Chinese Museum	31 Full Course. 25 Partial Course.
Feb. 21, 1850.	Musical Fund Hall	18 B.A. 31 M.A. 48 Partial Course.
July 18, 1850.	" " "	24 B.A. 18 M.A. 21 Partial Course.

Date.	Place.	Certificates.
Feb. 13, 1851.	Musical Fund Hall	17 B.A. 12 M.A. 33 Partial Course.
July 17, 1851.	" " "	15 B.A. 10 M.A. 32 Partial Course.
Feb. 12, 1852.	" " "	16 B.A. 2 M.A. 24 Partial Course.
July 15, 1852.	" " "	16 B.A. 4 M.A. 21 Partial Course.
Feb. 10, 1853.	" " "	18 B.A. 9 M.A. 24 Partial Course.
July 21, 1853.	" " "	23 B.A. 8 M.A. 22 Partial Course.
Feb. 9, 1854.	" " "	17 B.A. 7 M.A. 29 Partial Course.
July 13, 1854.	Concert Hall (Chestnut Street above Twelfth.)	21 B.A. 12 M.A. 34 Partial Course.
Feb. 15, 1855.	Musical Fund Hall	18 B.A. 9 M.A. 47 Partial Course.
July 12, 1855.	" " "	30 B.A. 14 M.A. 29 Partial Course.
Feb. 14, 1856.	" " "	21 B.A. 11 M.A. 42 Partial Course.
July 10, 1856.	National Hall (Market Street near Thirteenth.)	23 B.A. 12 M.A. 40 Partial Course.
Feb. 12, 1857.	Jayne's New Hall (Chestnut Street below Seventh.)	18 B.A. 14 M.A. 51 Partial Course.
July 16, 1857.	Jayne's New Hall	32 B.A. 10 M.A. 38 Partial Course.
Feb. 11, 1858.	" " "	19 B.A. 11 M.A. 32 Partial Course.
July 15, 1858.	Academy of Music	23 B.A. 14 M.A. 34 Partial Course.
Feb. 10, 1859.	Jayne's New Hall	21 B.A. 10 M.A. 32 Partial Course.
July 14, 1859.	Academy of Music	37 B.A. 11 M.A. 33 Partial Course.
Feb. 16, 1860.	" "	25 B.A. 11 M.A. 27 Partial Course.
July 12, 1860.	Concert Hall	26 B.A. 17 M.A. 26 Partial Course.

Date.	Place.	Certificates.
Feb. 14, 1861.	Concert Hall	31 B.A. 15 M.A. 32 Partial Course.
July 11, 1861.	Academy of Music	14 B.A. 18 M.A. 10 Partial Course.
Feb. 13, 1862.	" "	24 B.A. 10 M.A. 20 Partial Course.
July 10, 1862.	" "	21 B.A. 15 M.A. 13 Partial Course.
Feb. 12, 1863.	" "	14 B.A. 8 M.A. 21 Partial Course.
July 16, 1863.	" "	12 B.A. 12 M.A. 6 Partial Course.
Feb. 11, 1864.	" "	16 B.A. 16 M.A. 18 Partial Course.
July 14, 1864.	" "	19 B.A. 17 M.A. 19 Partial Course.
Feb. 16, 1865.	" "	24 B.A. 29 M.A. 12 Partial Course.
July 13, 1865.	" "	16 B.A. 17 M.A. 16 Partial Course.
Feb. 13, 1866.	" "	15 B.A. 14 M.A. 10 Partial Course.
July 12, 1866.	Musical Fund Hall	13 B.A. 9 M.A. 10 Partial Course.
Feb. 14, 1867.	Academy of Music	22 B.A. 11 M.A. 10 Partial Course.
July 11, 1867.	" "	15 B.A. 14 M.A. 15 Partial Course.
Feb. 13, 1868.	" "	16 B.A. 5 M.A. 6 Partial Course.
July 9, 1868.	" "	17 B.A. 3 M.A. 17 Partial Course.
Feb. 16, 1869.	" "	17 B.A. 6 M.A. 16 Partial Course.
July 8, 1869.	" "	15 B.A. 12 M.A. 20 Partial Course.
Feb. 10, 1870.	" "	18 B.A. 18 M.A. 10 Partial Course.
July 7, 1870.	" "	21 B.A. 9 M.A. 14 Partial Course.

Date.	Place.	Certificates.
Feb. 21, 1871.	Academy of Music	21 B.A. 14 M.A. 15 Partial Course.
July 6, 1871.	" "	19 B.A. 8 M.A. 20 Partial Course.
Feb. 17, 1872.	" "	23 B.A. 15 M.A. 24 Partial Course.
July 3, 1872.	" "	34 B.A. 8 M.A. 32 Partial Course.
Feb. 13, 1873.	" "	30 B.A. 2 M.A. 34 Partial Course.
June 27, 1873.	" "	33 B.A. 9 M.A. 29 Partial Course.
Feb. 19, 1874.	" "	29 B.A. 11 M.A. 28 Partial Course.
June 24, 1874.	" "	30 B.A. 8 M.A. 30 Partial Course.
Feb. 11, 1875.	" "	25 B.A. 13 M.A. 30 Partial Course.
June 30, 1875.	" "	42 B.A. 11 M.A. 31 Partial Course.
Feb. 17, 1876.	" "	40 B.A. 15 M.A. 33 Partial Course.
June 28, 1876.	" "	25 B.A. 5 M.A. 50 Partial Course.
Feb. 15, 1877.	" "	31 B.A. 15 M.A. 33 Partial Course.
June 27, 1877.	" "	25 B.A. 11 M.A. 27 Partial Course.
Feb. 14, 1878.	Association Hall	27 B.A. 21 M.A. 36 Partial Course.
June 26, 1878.	" "	31 B.A. 11 M.A. 27 Partial Course.
Feb. 13, 1879.	" "	27 B.A. 10 M.A. 17 Partial Course.
June 25, 1879.	" "	25 B.A. 7 M.A. 30 Partial Course.
Feb. 11, 1880.	" "	27 B.A. 7 M.A. 19 Partial Course.
June 30, 1880.	" "	28 B.A. 14 M.A. 32 Partial Course.

Date.	Place.	Certificates.
June 29, 1881.	Association Hall	25 B.A. 20 M.A. 43 Partial Course.
June 28, 1882.	" "	21 B.A. 29 M.A. 44 Partial Course.
Feb. 14, 1883.	" "	37 B.A. 12 M.A. 25 Partial Course.
June 27, 1883.	" "	24 B.A. 13 M.A. 25 Partial Course.
Feb. 14, 1884.	" "	20 B.A. 23 M.A. 17 Partial Course.
June 26, 1884.	" "	32 B.A. 14 M.A. 14 Partial Course.
Feb. 12, 1885.	" "	34 B.A. 12 M.A. 19 Partial Course.
June 25, 1885.	" "	22 B.A. 11 M.A. 22 Partial Course.
Feb. 11, 1886.	" "	25 B.A. 1 M.A. 11 Partial Course.
June 24, 1886.	" "	32 B.A. 10 M.A. 27 Partial Course.
Feb. 10, 1887.	Chestnut Street Opera House	29 B.A. 30 Partial Course.
June 30, 1887.	" " " "	30 B.A. 8 M.A. 17 Partial Course.
Feb. 16, 1888.	" " " "	40 B.A. 16 M.A. 27 Partial Course.
June 28, 1888.	" " " "	40 B.A. 17 M.A. 17 Partial Course.
Feb. 14, 1889.	" " " "	32 B.A. 6 M.A. 18 Partial Course.
June 27, 1889.	" " " "	26 B.A. 3 M.A. 12 Partial Course.
Feb. 13, 1890.	" " " "	22 B.A. 4 M.A. 8 Partial Course.
June 26, 1890.	" " " "	26 B.A. 6 M.A. 19 Partial Course.
Feb. 12, 1891.	" " " "	47 B.A. 10 M.A. 1 Partial Course.
June 25, 1891.	" " " "	47 B.A. 13 M.A. 27 Partial Course.

Date.	Place.	Certificates.
June 30, 1892.	Chestnut Street Opera House	44 B.A. 15 M.A. 7 Collegiate. 30 Partial Course.
June 29, 1893.	" " " "	84 B.A. 18 M.A. 1 Collegiate. 37 Partial Course.
June 21, 1894.	Broad Street Theatre	76 B.A. 12 M.A. 16 Collegiate. 2 Honorary. 9 Partial Course.
June 13, 1895.	" " "	81 B.A. 4 M.A. 11 Collegiate. 2 Honorary. 7 Partial Course.
June 16, 1896.	Chestnut Street Theatre.....	32 B.A. 7 M.A. 50 B.S. 6 Collegiate. 7 Partial Course.
June 17, 1897.	Chestnut Street Opera House	60 B.A. 5 M.A. 28 B.S. 7 Partial Course.
June 16, 1898.	" " " "	43 B.A. 49 B.S. 13 Collegiate. 1 Honorary. 1 Partial Course.
June 15, 1899.	" " " "	81 B.A. 66 B.S. 15 Collegiate. 3 M.A. 6 Partial Course.
June 14, 1900.	Academy of Music	90 B.A. 35 B.S. 10 Collegiate. 15 M.A. 9 Partial Course.
June 14, 1901.	" "	86 B.A. 34 B.S. 5 Collegiate. 2 M.A. 1 Honorary. 3 Partial Course.

Totals	Full Course	Certificates	238
		B.A.	2698
		B.S.	262
	*Partial Course		2449
	Post-graduate	M.A.	1039
		Collegiate	84
	Honorary		6

Total number admitted to school (including June, 1900), 17,665.

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* This includes all students who received diplomas certifying to their satisfactory completion of at least a two years' course, but less than a four years' course.

APPENDIX D

LIST OF HONORS CONFERRED AT GRADUATION.

February, 1848.	Honorary Essay	John R. Whitney.
July, 1848.	" "	Cornelius N. Weygandt.
February, 1849.	" "	Robert M. Patterson.
July, 1849.	" "	Benjamin H. Haines.
February, 1850.	" "	Albert L. Gihon.
July, 1850.	Honorary Address	Lewis Tees.
February, 1851.	" "	Samuel S. Fisher.
July, 1851.	" "	Richard B. Wise.
February, 1852.	" "	James T. Mitchell.
July, 1852.	" "	John C. White.
February, 1853.	" "	James B. Fisher.
July, 1853.	" "	Evan W. Thomas.
February, 1854.	" "	William F. Mason.
July, 1854.	" "	Henry W. Knauff.
February, 1855.	" "	Louis Elsberg.
July, 1855.	" "	Reese F. Alsop.
February, 1856.	" "	John Story Jenks.
July, 1856.	" "	Frank K. Hipple.
February, 1857.	" "	James Morgan Hart.
July, 1857.	" "	John G. Johnson.
February, 1858.	" "	Stephen W. White.
July, 1858.	" "	Edward D. Ledyard, Jr.
February, 1859.	" "	Samuel Ashmead McFarland.
July, 1859.	" "	I. Gilbert Young.
February, 1860.	" "	George A. Wilt.
July, 1860.	First Honor	George H. Napheys.
	Second "	Albert R. Leeds.
	Third "	James P. Young.
	Fourth "	Harry F. Baxter.
February, 1861.	First "	Daniel P. Smith.
	Second "	Charles C. Lister.
	Third "	Frank W. Winslow.
	Fourth "	Jacob Sulzberger.

July, 1861.	First Honor	Byerly Hart.
	Second "	Joseph L. McFarland.
	Third "	William H. James.
February, 1862.	First "	Julius Stern.
	Second "	Joseph Chandler Murphy.
	Third "	Albert F. Hackstadter.
July, 1862.	Latin Salutatory	Charles W. Reid.
	First Honor	Joseph Mason.
	Second "	Tryon Reakirt.
	Third "	Wilberforce Wells.
February, 1863.	First "	Theodore P. Matthews.
	Second "	Cicero Hunt.
	Third "	Henry Wiener.
	Fourth "	Henry F. Chorley.
July, 1863.	First "	William Appleton Stavers.
	Second "	George W. Butterworth.
	Third "	Thomas H. P. Shellady.
February, 1864.	First "	Robert K. Kennedy.
	Second "	Edwin J. Houston.
	Third "	William M. Spackman.
July, 1864.	First "	J. Mason Child.
	Second "	Charles F. Kroeh.
	Third "	Lewis Waln Smith.
	Fourth "	Charles K. Mills.
February, 1865.	First "	Robert H. Ferguson.
	Second "	Richardson L. Wright, Jr.
	Third "	Nathan A. Taylor.
	Fourth "	Henry F. Horstmann.
July, 1865.	First "	Thomas W. Ayers.
	Second "	Oliver C. Briggs.
	Third "	John A. Scanlan.
	Fourth "	William C. Butler.
February, 1866.	First "	Ernest A. Farrington.
	Second "	John B. Stauffer.
	Third "	Benjamin F. Houseman.
	Fourth "	Mifflin D. Nece.
July, 1866.	First "	S. Edwin Megargee.
	Second "	Worthington B. Thomas.
	Third "	Curtis N. Harris.
	Fourth "	John W. Millick.

February, 1867.	First Honor	John K. McCarthy.
	Second "	Ignatius J. Dohan.
	Third "	Edward Chaninel.
	Fourth "	James A. Haddock.
July, 1867.	First "	Reid T. Stewart.
	Second "	John J. Foulkrod.
	Third "	Alfred C. Rex.
	Fourth "	George W. Hunt.
February, 1868.	First "	Charles E. D'Invilliers.
	Second "	Harry T. Kingston.
	Third "	Albert N. Heritage.
	Fourth "	George T. Harris.
July, 1868.	First "	W. Frederick Monroe.
	Second "	Henry Rosenbaum.
	Third "	Andrew W. Manship.
	Fourth "	Albert C. Peale.
February, 1869.	First "	Lewis S. Lee.
	Second "	Richard G. Lippincott.
	Third "	Benjamin F. Moore.
	Fourth "	Eugene T. Linnard.
July, 1869.	First "	Edgar S. Cook.
	Second "	William W. Stout.
	Third "	John H. Carroll.
	Fourth "	Frederick K. Moore.
February, 1870.	First "	Dewey Bates.
	Second "	Frank P. Prichard.
	Third "	Harry Willis.
	Fourth "	Elihu Thomson.
July, 1870.	First "	George J. Garde.
	Second "	Thomas W. Illman.
	Third "	William H. Greene.
	Fourth "	Robert H. Walch.
February, 1871.	First "	George R. Buckman.
	Second "	George W. Cloak.
	Third "	J. Harry Buckingham.
	Fourth "	Henry G. Harris.
July, 1871.	First "	Robert N. Simpers.
	Second "	William H. Rock.
	Third "	Frank Rigler.
	Fourth "	Louis Tissot.

February, 1872.	First Honor	Charles W. Neely.
	Second "	H. Stewart Moorhead.
	Third "	Lewis Cassidy.
	Fourth "	Joseph H. Oram.
July, 1872.	First "	Clarence Moffitt.
	Second "	Charles E. Stanley.
	Third "	Thomas Keely.
	Fourth "	Solomon Solis Cohen.
February, 1873.	First "	Howard W. Lewis.
	Second "	Andrew J. Parker, Jr.
	Third "	Edward S. Rosenbaum.
	Fourth "	Perseus Whitechurch.
June, 1873.	First "	Charles F. Wignall.
	Second "	Walter C. Rodman.
	Third "	Francis X. Dercum.
	Fourth "	William C. Craige.
February, 1874.	First "	Andrew M. Beveridge.
	Second "	Charles H. Weikel.
	Third "	John R. Stephens.
	Fourth "	Edward Braddock.
June, 1874.	First "	Randall Chase.
	Second "	John M. Walker.
	Third "	J. Torr Harmer.
	Fourth "	Charles S. Boyer.
February, 1875.	First "	Hiram R. Vandergrift.
	Second "	Albert B. Weimer.
	Third "	John W. Sharphouse.
	Fourth "	Samuel Phillips, Jr.
June, 1875.	First "	William R. Grice, Jr.
	Second "	Llewellyn Snowden.
	Third "	William Barnett, Jr.
	Fourth "	Harry Shelmire Hopper.
February, 1876.	First "	Rufus B. Marks.
	Second "	Conrad K. Bertolet.
	Third "	George W. Heinitsh.
	Fourth "	James J. La Vallin.
June, 1876.	First "	Robert S. DeBow.
	Second "	Frederick J. Geiger.
	Third "	Alfred E. Petry.
	Fourth "	Horace G. Artman.

February, 1877.	First Honor	Robert S. M. Camden.
	Second "	Frank W. Thomas.
	Third "	Edward G. Taulane.
	Fourth "	William McKnight.
June, 1877.	First "	Thomas M. Hamilton.
	Second "	Arthur H. Scherer.
	Third "	Samuel S. Daniels.
	Fourth "	John H. McIntyre.
February, 1878.	First "	Cornelius D. Mecutchen.
	Second "	Ormond Rambo.
	Third "	Harry W. Autenrieth.
	Fourth "	Julius C. Levi.
June, 1878	First "	George Howard Cliff.
	Second "	Charles E. McKean.
	Third "	William Albright.
	Fourth "	Henry N. Funk.
February, 1879.	First "	John F. Lewis.
	Second "	Charles E. Woodruff.
	Third "	William W. Nolen.
	Fourth "	Charles Long.
June, 1879.	First "	William C. Arrison.
	Second "	Adolph Eicholz.
	Third "	David Wallerstein.
	Fourth "	Alexander S. Halstead.
February, 1880.	First "	John C. Dawson, Jr.
	Second "	E. Clinton Rhoads.
	Third "	Henry A. Smedley.
	Fourth "	Percy B. Metzger.
June, 1880.	First "	E. Wilbur Rice.
	Second "	Edward W. Burt.
	Third "	G. Bickley Burns.
	Fourth "	Herman W. Rennert.
June, 1881.	First "	Edwin D. Hoffman.
	Second "	Russell P. Jacoby.
	Third "	Otto T. Zacherle.
	Fourth "	Walter Lee.
June, 1882.	First "	J. William Richards.
	Second "	Jacob F. Henderson.
	Third "	Samuel R. Turner.
	Fourth "	Henry H. Senior.

February, 1883.	First Honor	Ernest E. Faber.
	Second "	Oliver Huckel.
	Third "	J. Siegmund Levin.
	Fourth "	Louis P. Brenan.
June, 1883.	First "	Roland P. Falkner.
	Second "	Charles B. Trewin.
	Third "	G. Whitefield Chance.
	Fourth "	John S. Dove, Jr.
February, 1884.	First "	Edgar V. Seeler.
	Second "	Robert J. McLaughlin.
	Third "	Clarence S. Mitchell.
	Fourth "	Benjamin F. Lacy.
June, 1884.	First "	Clarence Gardner.
	Second "	Charles H. C. Franklin.
	Third "	Charles Walter.
	Fourth "	William Hildrup Davis.
February, 1885.	First "	Peter T. Wright.
	Second "	William H. Price.
	Third "	John D. McIlhenny.
	Fourth "	William A. Suits.
June, 1885.	First "	J. Clifford Rennard.
	Second "	Joseph C. Fox.
	Third "	Edwin G. Sprowles.
	Fourth "	Harry C. Hoffman.
February, 1886.	First "	Charles Weber Jones.
	Second "	H. Lawrence Noble.
	Third "	Daniel B. Shumway.
	Fourth "	Wayne P. Rambo.
	Fifth "	William L. Turner, Jr.
June, 1886.	First "	Clinton Rogers Woodruff.
	Second "	Horace Michener Rumsey.
	Third "	George W. Hyde, Jr.
	Fourth "	James H. A. Brooks.
	Fifth "	Frederick W. Hall.
February, 1887.	First "	Theodore C. Combes.
	Second "	Clarence B. White.
	Third "	Franklin H. Davis.
	Fourth "	Howard W. DuBois.
	Fifth "	Herman H. Wunderlich.

June, 1887.	First Honor	Albert Elmer Hancock.
	Second "	Edward Adams Shumway.
	Third "	John P. Mulrenan.
	Fourth "	Hugh M. Wharton.
	Fifth "	Henry Weiner.
February, 1888.	First "	Philip P. Calvert.
	Second "	Frederic V. Hetzel.
	Third "	David Guy Anderson.
	Fourth "	J. Lee Patton.
June, 1888.	First "	Louis Lay Calvert.
	Second "	Frederic McGaw.
	Third "	Theodore W. Koch.
	Fourth "	William A. Haussmann.
February, 1889.	First "	John J. E. Monaghan.
	Second "	Anthony P. Valentine, Jr.
	Third "	John C. Grier.
	Fourth "	Alfred C. Fleckenstein.
June, 1889.	First "	Arthur G. Singer.
	Second "	John S. Dunmore.
	Third "	Jonathan Taylor Rorer, Jr.
	Fourth "	William B. Kenderdine.
February, 1890.	First "	Frank Earle Schermerhorn.
	Second "	Vivian F. Gable.
	Third "	Charles H. Cook.
	Fourth "	William W. Ruley.
June, 1890.	First "	Edward T. Child.
	Second "	William F. Kelly.
	Third "	John A. Hearst.
	Fourth "	Carl D. Sanger.
February, 1891.	First "	Francis P. Witmer.
	Second "	J. Harry Graham.
	Third "	James H. Donnelly.
	Fourth "	J. Howard March.
June, 1891.	First "	Franklin Spencer Edmonds.
	Second "	Samuel D. Matlack.
	Third "	Gilbert S. Moore, Jr.
	Fourth "	Oscar E. Boericke.
June, 1892.	First "	J. Lawrence Johnson.
	Second "	Frank P. O'Donnell.
	Third "	Isaac Hassler.
	Fourth "	Pierce Mecutchen.

June, 1893.	First Honor	Henry James Lamborn.
	Second "	William Bernard Bray.
	Third "	Arthur Castle Bray.
	Fourth "	Norman Roberts.
June, 1894.	First "	Daniel C. Donoghue.
	Second "	Harold W. Graeff.
	Third "	Wilbur Morse.
	Fourth "	William Clarence Ebaugh.
June, 1895.	First "	John Lewis Haney.
	Second "	Horace Stern.
	Third "	Harry Fernberger.
	Fourth "	William H. Conroy, Jr.
June, 1896.	First "	Harold Harrison Tryon.
	Second "	Edward Zeigler Davis.
	Third "	Stanley Folz.
	Fourth "	Isaac V. Levi.
June, 1897.	First "	Albert Griffith Miller.
	Second "	Rees Jones Frescoln.
	Third "	Robert Alexander Beggs, Jr.
	Fourth "	Herbert Sydney Langfeld. Paul Rosenway, Jr.
June, 1898.	First "	Thomas Henry Walnut, Jr.
	Second "	George Alvin Snook.
	Third "	Jacob Hoffman.
	Fourth "	Edward Isaac Nathan.
June, 1899.	First "	Royden Keith Yerkes.
	Second "	Harry Anthony Domincovich. Julius N. H. Komarovski.
	Third "	Edward Tiel Butterworth. John Bernhard Mencke, Jr.
	Fourth "	William Jones Smith. Milton Benneville Stallman.
June, 1900.	First "	William Clarke Mason.
	Second "	Robert Thompson McCracken.
	Third "	Ardrey Whiddin Downs.
	Fourth "	Elias Goodstein.
June, 1901.	First "	Jerome Joseph Rothschild.
	Second "	Benjamin Harrison Ludlow.
	Third "	Harry Abraham Schatz.
	Fourth "	Frederick Wilson Prichett.
	Fifth "	George Edward Roth.

APPENDIX E

LIST OF VALEDICTORIANS.

First Class ..... Clinton Gillingham.
Fourth Class ..... Henry Schell Hagert.
Fifth Class ..... Daniel Strock.
Sixth Class ..... Joseph R. E. Sutton.
Seventh Class ..... Robert P. Kane.
July 22, 1847 ..... Alexander M. Harrisson, Alumni Address.
February 17, 1848 ..... William J. McMullin.
July 20, 1848 ..... Turner Mullins.
February 15, 1849 ..... John L. Newbold.
July 19, 1849 ..... Henry N. Mallery.
February 21, 1850 ..... Samuel B. Dalrymple.
July 18, 1850 ..... George H. Burns.
February 13, 1851 ..... William H. Hibberd.
July 17, 1851 ..... George Inman Riché.
February 12, 1852 ..... Joseph S. Kennard.
July 15, 1852 ..... Alexander H. Jones.
February 10, 1853 ..... William Wells.
July 21, 1853 ..... Orlando G. Wagner.
February 9, 1854 ..... George H. Mitchell.
July 13, 1854 ..... Henry Cowperthwaith.
February 15, 1855 ..... George W. Allen.
July 12, 1855 ..... Frank Wolf.
February 14, 1856 ..... J. Livingston Reese.
July 10, 1856 ..... Jacob G. H. Ring, Jr.
February 12, 1857 ..... William J. Perry.
July 16, 1857 ..... J. Shipley Newlin.
February 11, 1858 ..... Lucius M. S. Haynes.
July 15, 1858 ..... Philidore S. Bell.
February 10, 1859 ..... Samuel B. Huey.
July 14, 1859 ..... William Harrison Lambert.
February 16, 1860 ..... C. Harry Brock.

July 12, 1860.....Edwin C. Griffiths.
February 14, 1861.....George W. Shields.
July 11, 1861.....David Evans.
February 13, 1862.....Louis A. Kershaw.
July 10, 1862.....Joseph R. Taylor Gray.
February 12, 1863.....Henry J. McCarthy.
July 16, 1863.....William Nicholson.
February 11, 1864.....Edwin B. Paul.
July 14, 1864.....W. Scott Stites.
February 16, 1865.....Clement M. Brown.
July 13, 1865.....Richard M. Newman.
February 13, 1866.....Robert Williams.
July 12, 1866.....Alfred M. H. Herkness.
February 14, 1867.....J. Bard Worrell.
July 11, 1867.....William Newton Meeks.
February 13, 1868.....Henry Schmoele.
July 9, 1868.....Charles M. Thomas.
February 16, 1869.....William F. Jones.
July 8, 1869.....Langdon C. Stewardson.
February 10, 1870.....Robert E. Pattison.
July 7, 1870.....William Dayton Roberts.
February 21, 1871.....Henry G. Harris.
July 6, 1871.....Robert N. Simpers.
February 17, 1872.....Robert W. Finletter.
July 3, 1872.....Peter H. Boyd.
February 13, 1873.....William H. Peterman.
June 27, 1873.....William C. Craige.
February 19, 1874.....Andrew M. Beveridge.
June 24, 1874.....Maurice Houseman.
February 11, 1875.....Albert B. Weimer.
June 30, 1875.....Charles H. Lodor.
February 17, 1876.....John Jamison, Jr.
June 28, 1876.....Francis D. T. Bickley.
February 15, 1877.....Frank W. Thomas.
June 27, 1877.....David Hoffman.
February 14, 1878.....Alexander J. D. Haupt.
June 26, 1878.....Charles Biddle.
February 13, 1879.....Thomas J. Van Ness.
June 25, 1879.....Edward P. Nixon.
February 11, 1880.....John C. Dawson, Jr.
June 30, 1880.....G. Bickley Burns.

June 29, 1881 ..... Morton M. Newburger.
June 28, 1882 ..... Albert H. Smyth.
February 14, 1883 ..... Oliver Huckel.
June 27, 1883 ..... Roland P. Falkner.
February 14, 1884 ..... Benjamin F. Lacy.
June 26, 1884 ..... William Hildrup Davis.
February 12, 1885 ..... Charles C. Hicks, Jr.
June 25, 1885 ..... Joseph C. Fox.
February 11, 1886 ..... Virgil E. Rorer.
June 24, 1886 ..... Clinton Rogers Woodruff.
February 10, 1887 ..... Theodore C. Combes.
June 30, 1887 ..... Albert Elmer Hancock.
February 16, 1888 ..... Chester N. Farr, Jr.
June 28, 1888 ..... Theodore W. Koch.
February 14, 1889 ..... John A. McCarthy.
June 27, 1889 ..... Morton Z. Paul.
February 13, 1890 ..... Frank Earle Schermerhorn.
June 26, 1890 ..... William W. Wood.
February 12, 1891 ..... James Henry Donnelly.
June 25, 1891 ..... Franklin Spencer Edmonds.
June 30, 1892 ..... J. Lawrence Johnson.
June 29, 1893 ..... William B. Bray.
June 21, 1894 ..... Wilbur Morse.
June 13, 1895 ..... William H. Conroy, Jr.
June 16, 1896 ..... Harold Harrison Tryon.
June 17, 1897 ..... T. Rawlins Adams.
June 16, 1898 ..... Ernest W. Heilig.
June 15, 1899 ..... Roy Phaon Lear.
June 14, 1900 ..... William Clarke Mason.
June 14, 1901 ..... Benjamin Harrison Ludlow.

APPENDIX F

ARMY AND NAVY LIST.

In 1897 the Board of Managers of the Associated Alumni appointed a Committee, consisting of Captain Frederick Schober, Professor Daniel W. Howard, Daniel W. Grafly, General James W. Latta, and Harry Shelmire Hopper, to prepare plans for a suitable memorial to those Alumni of the Central High School who had fought in the service of the country. Since that time no efforts have been spared to compile a complete list of those Alumni who had enrolled for military or naval service. As the records are difficult to trace, it is probable that this list is incomplete; those who can correct or supplement the information here given are asked to communicate with the Historian of the Associated Alumni, Harry Shelmire Hopper.

The abbreviation "U.S.A." indicates service in the army, including both regulars and volunteers; "U.S.N." indicates similarly service in the navy; "W. P." and "N. A." indicate West Point and Naval Academy at Annapolis.

Abbey, George P. Eighteenth Class. U.S.A.
Adams, Benjamin F. Thirtieth Class. Lieut. U.S.A. Died in U. S. service at Petersburg.
Addicks, Charles Henry. Fortieth Class. U.S.A.
Addick's, Thomas H. Twenty-fourth Class. Major 157th Pa. Vols., U.S.A. Deceased.
Allen, Harrison. Thirty-third Class. U.S.A.
Allen, William A. H. Thirty-fifth Class. U.S.N.
Allison, William Andrewes. Forty-second Class. U.S.A.
Anspach, Frederick J. Forty-first Class. 15th Pa. Cav., U.S.A.
Appel, Daniel M. Fifty-eighth Class. U.S.A.
Appleton, Charles M. Forty-fourth Class. U.S.A. Deceased.
Armstrong, James A. Twentieth Class. U.S.A.
Armstrong, William H. Fortieth Class. U.S.A.
Asay, J. Lambert. Twenty-eighth Class. U.S.A.
Ashton, Francis. Twenty-third Class. U.S.A. Deceased.

Ashton, Francis Monroe. Forty-second Class. U.S.A. Corp. Co. I, 16th Illinois Inf. Died September 12, 1861, at Quincy, Ill.
Ashworth, James. Twenty-sixth Class. Col. U.S.A. Deceased.
Atkinson, William B. Fifteenth Class. U.S.A.
Audenried, Joseph Crain. Thirty-fourth Class. W. P. U.S.A. Colonel and Aide-de-Camp to General-in-Chief U.S.A.
Babbit, William T. Thirty-fifth Class. U.S.N.
Bacon, Amos Wilson. Thirty-ninth Class. U.S.A.
Baker, Samuel J. Thirty-fourth Class. U.S.N. and U.S.A. Deceased.
Banes, Charles Henry. Twelfth Class. Col. 72d Pa. Vols., U.S.A. Brevet Lieut.-Col. Died January 15, 1897.
Bankson, John P. Seventeenth Class. U.S.A. Capt. 118th Pa. Deceased.
Barker, Charles A. Thirty-seventh Class. U.S.A.
Barton, Clarence M. Thirty-fourth Class. U.S.N. Deceased.
Bastian, Huber. Thirty-eighth Class. U.S.A.
Bates, James T. Forty-first Class. Major U.S.A.
Beck, Charles A. Eleventh Class. U.S.A.
Bellas, Henry Hobart. Forty-fifth Class. U.S.A. Captain. Retired.
Bellows, Horace M. Thirty-third Class. U.S.A.
Benyaurd, William Henry Harrison. Thirty-fifth Class. Major U.S.A. Engineers, W. P. Lieut.-Col. Deceased.
Benzon, John L. Thirty-fifth Class. 2d Pa. Reserves, U.S.A.
Berger, Thomas E. Forty-third Class. U.S.A.
Biles, Edwin R. Fifth Class. Lt.-Col. 99th Pa. Vols., U.S.A. Deceased.
Bishop, John S. Sixteenth Class. U.S.A. Col. U. S. Vols. Capt. 13th Inf., U.S.A.
Blakely, George. Eighty-ninth Class. W. P.
Blakely, John R. Ninetieth Class. W. P.
Blakely, J. R. Young. Ninety-second Class. N. A.
Blakiston, Charles. Fortieth Class. U.S.A.
Blye, Henry Clay. Forty-second Class. U.S.N.
Bolton, Samuel. Thirty-seventh Class. U.S.A. Killed at Richmond, War of Rebellion.
Borthwick, John. Thirty-second Class. U.S.N.
Bower, John S. Thirty-second Class. U.S.A.
Bowers, John L. Thirty-second Class. U.S.A. 72d Pa. Vols.
Bowers, William Thorn. Thirty-eighth Class. U.S.A.
Boyd, John W. Twenty-first Class. Adj. 10th Mo. Vols., U.S.A.

Bradfield, George Milton. Thirty-seventh Class. U.S.A. Surgeon 7th U. S. Inf.

Bradford, John S. Twenty-sixth Class. Captain. U. S. Coast Survey. U.S.N.

Bradley, Michael. Twentieth Class. U.S.N.

Bradley, William. Nineteenth Class. Asst. Surgeon U.S.N., 1859. Lost in the Levant, 1860.

Braid, Andrew. Forty-fifth Class. U. S. Coast Survey.

Bratton, William Landon. Forty-third Class. U.S.A.

Brechemin, Louis. Fifty-fourth Class. Major and Surgeon, U.S.A.

Breed, William M. Eleventh Class. U.S.A. Deceased.

Briggs, Raymond W. One Hundred and Second Class. U.S.A. Lieut. Co. G, 25th Infantry, Spanish War. In Philippines.

Brightly, Charles H. Thirty-first Class. U.S.A. Died from wounds received at battle of Wilderness, War of Rebellion. W. P. Lt.-Col. 4th Infantry.

Brinton, J. Bernard. Twenty-third Class. M.D. U.S.A. Medical Purveyor, Army of Potomac.

Broadbent, Alfred L. Thirty-fourth Class. U.S.N. U. S. steamer "Grant."

Brooke, Isaac. Forty-seventh Class. In U.S.A. at Antietam.

Brookfield, Robert Morris. Ninety-fourth Class. Lieut. U.S.A.

Brown, William George. Thirty-seventh Class. Engineer Corps, U.S.N.

Browne, Alexander. Forty-first Class. M.D. U.S.N. Hosp. Ser.

Browne, James Amos. Thirty-seventh Class. U.S.A.

Budd, Samuel Pemberton. Forty-fifth Class. U.S.N. Engineer Corps.

Bullock, James Isaac. Forty-first Class. U.S.A.

Bunn, Christopher H. Sixth Class. M.D. U.S.A. Killed in Walker's expedition to Nicaragua.

Burchard, Charles M. Twenty-seventh Class. U.S.N. 2d Asst. Engineer.

Burrows, William M. Thirty-seventh Class. U.S.A.

Butcher, Henry Clay. Forty-third Class. U.S.A.

Byram, James Emory. Thirty-sixth Class. U.S.A. Orderly Sergeant.

Byrnes, Timothy A. Sixteenth Class. U.S.A.

Carels, Joseph S. Third Class. U.S.N., Asst. Paymaster. Attached to U. S. steamer "Clifton" in Admiral Farragut's fleet, West Gulf Squadron, 1862-63.

Carpenter, Lewis Henry. Twenty-sixth Class. U.S.A. Brig.-Gen. Retired. Civil War, Spanish War.

Carr, Overton. Fiftieth Class. U.S.A. Deceased.

Cathcart, James Harper. Forty-fourth Class. U.S.A.

Cavada, Adolphus F. Twenty-third Class. U.S.A. Deceased.

Cavada, Frederick F. Fifteenth Class. U.S.A. Lt.-Col. 114th Pa. Vols. General in Cuban Revolutionary Army.

Chambers, William. Thirty-sixth Class. U.S.A. Killed in first battle of Fredericksburg, War of Rebellion. Orderly Sergeant.

Chase, Thomas. Thirty-eighth Class. U.S.N.

Chipman, Edward D. Thirty-fourth Class. U.S.A.

Chur, Jacob F. Sixteenth Class. U.S.A. Adj. 56th Pa. Vols.

Church, William F. Forty-first Class. U.S.A.

Clay, Fletcher. Twenty-third Class. U.S.A. Killed at Fredericksburg, War of Rebellion, December 13, 1862. 1st Lieut. 145th Pa. Vols.

Coane, Thomas M. Forty-third Class. U.S.A.

Cohen, J. Solis. Twenty-third Class. M.D., Fleet Surgeon U.S.N., on steamer "Florida," 1861.

Colahan, Charles Ellwood. Fiftieth Class. U.S.N.

Coleman, Francis Marion. Forty-second Class. U.S.A.

Collom, George F. Twenty-eighth Class. U.S.A.

Colton, William F. Thirty-fourth Class. U.S.A. Capt. 15th Pa. Cav.

Conaway, John F. Thirtieth Class. U.S.A. Lieut. 15th Pa. Cav.

Cook, George H. Nineteenth Class. U.S.N. Medical Director.

Cooper, Thomas J. W. Forty-fourth Class. U.S.N.

Coppuck, Malcolm M. Fifteenth Class. U.S.A.

Cowan, Henry Inch. Forty-fifth Class. U.S.A.

Cowden, Matthew A. Thirty-fifth Class. U.S.A.

Cox, Thomas C. Thirty-fifth Class. U.S.A.

Coxe, Edward E. Twenty-eighth Class. U.S.A. Died of wounds received at Rappahannock Station, War of Rebellion, November 7, 1863. 2d Lieut. Co. D, 119th Pa. Vols.

Coxe, Frank Morrell. Thirty-fourth Class. Col. U.S.A. Asst. Paymaster-Gen.

Coxe, William Ellery C. Twenty-sixth Class. U.S.A.

Crawford, Charles Henry. Forty-third Class. U.S.A.

Creely, John V. Thirty-first Class. U.S.A.

Crilly, Francis J. Twenty-fifth Class. W. P. Brevet Major, Lt.-Col., and Col. U.S.A.

Crispin, Silas. Eleventh Class. U.S.A.

Crosman, Frederick E. Thirty-first Class. U.S.A. Lt.-Col. 157th Pa. Vols.

Culbertson, William. Thirtieth Class. U.S.A.

Cummings, Alexander. Forty-sixth Class. U.S.A.

Cummings, A. Boyd. Eleventh Class. N.A. U.S.N. Lt.-Commdr. Killed on steamer "Richmond" at Port Hudson, War of Rebellion.

Cummings, Thomas, Jr. Thirty-seventh Class. U.S.A.

Curtis, Scovill L. Forty-first Class. U.S.A.

Cushman, William H. F. Twenty-fourth Class. U.S.N. Chief Engineer on U. S. steamer "Kearsarge" in naval engagement with the steamer "Alabama," War of Rebellion.

Davis, Edward T. Fifty-second Class. U.S.A.

Davis, George Harry. Thirty-first Class. U.S.A.

Davis, James C. Thirty-fifth Class. U.S.A.

Davis, Joseph R. Thirty-seventh Class. U.S.A. Deceased.

Dechert, Robert Porter. Thirty-seventh Class. U.S.A. Col. 29th Pa. Gen. N. G. P. Deceased.

De Cou, Mahlon. Forty-first Class. U.S.A.

De Courcy, Marcelin L. Thirty-sixth Class. U.S.A. Deceased.

Deimling, Francis C. Twenty-first Class. U.S.A. Col. 10th Mo. Vols.

Dekline, Theodore W. Forty-first Class. U.S.N.

Delany, Linford. Twenty-sixth Class. U.S.A. 52d and 196th Pa. Vols.

D'Estimauville, Frederick H. Fourteenth Class. U.S.N. Deceased.

Detré, Cyrus S. Thirty-second Class. Adj. 88th Pa. Vols. U.S.A.

Diamond, Jasper Francis. Forty-second Class. U.S.N. Deceased.

Divine, John G. Twenty-eighth Class. U.S.A.

Dohnert, Alfred H. Forty-first Class. U.S.A.

Donahue, Hamilton. Seventh Class. U.S.A. Killed at Gaines's Mill, Va., War of Rebellion, June 27, 1862. 1st Lieut. 95th Pa. Inf. Vols.

Donaldson, Augustus W. Thirty-sixth Class. U.S.A.

Doran, Charles R. Twenty-fifth Class. U.S.A. Deceased.

Douglass, John James Norval. Twentieth Class. U.S.A. Wounded at Petersburg in the spring of 1864. Co. C, 58th Pa. Vols.

Doyle, James G. Seventy-sixth Class. U.S.N.

Dungan, Jacob S. Tenth Class. U.S.N.

Dunglison, Richard J. Seventeenth Class. U.S.A.

Dunott, Thomas Justus. Fourteenth Class. Acting Asst. Surgeon U.S.A., March 17 to May 25, 1862. Major and Surgeon (?) 1st Md. Cavalry, May, 1862. Acting Asst. Surgeon U.S.A., May, 1864, to May, 1865. Died May 20, 1893.

Duplaine, Benjamin. Thirty-sixth Class. Engineer Corps, U.S.N.

Duplaine, Edmund A. C. Fifteenth Class. U.S.N.

Durrah, Franklin Hugh. Thirty-ninth Class. U.S.A.

Eakin, Chandler P. Twenty-eighth Class. Major 1st U. S. Artillery, U.S.A. Retired.

Eakin, Lewis A. Thirtieth Class. U.S.A.

Earnest, William H. Thirty-first Class. U.S.A.

Eberback, Edward W. Twenty-third Class. U.S.A.

Eckhardt, Charles H. Thirty-fifth Class. U.S.A.

Edger, Benjamin F., Jr. Ninety-fifth Class. U.S.A. 1st Lieut., Asst. Engineer.

Edwards, Richard F. Forty-second Class. U.S.N. Asst. Engineer. Died on board the "Kearsarge," off the coast of Africa, March 23, 1866. Prior to above in U.S.A., Co. D, 90th Pa. Vols.

Elliot, Alexander Graham. Thirty-second Class. U.S.A. 1st Lieut. Keystone Battery, War of Rebellion. Deceased.

Elliot, John Thompson. Twenty-third Class. U.S.A. Deceased.

Elliot, Ralph W. Thirty-fifth Class. U.S.A.

Ellmaker, Thomas Henderson. Forty-sixth Class. U.S.A.

England, Thomas Y. Twenty-sixth Class. U.S.A.

English, Thomas C. Fourth Class. W. P. Lt.-Col. 2d Infantry, U.S.A. Deceased.

Evans, Franklin. Thirty-seventh Class. U.S.N. U.S.A.

Fagen, John Edward. Thirty-ninth Class. U.S.A., Civil War. Died April 23, 1901.

Farrington, H. Walter. Fortieth Class. M.D. Surgeon in U.S.A.

Fisher, Samuel Sparks. Eighteenth Class. W. P. U.S.A. (Assistant in C. H. S. U. S. Commissioner of Patents.)

Fitzgerald, Charles H. Forty-third Class. N. A. U.S.N.

Ford, Edwin, Jr. Thirty-ninth Class. U.S.A. 119th Pa. Inf. Vols., 2d Lieut. Co. I. Killed at Spottsylvania Court-House, May 10, 1864.

Ford, Robert O. N. Twenty-fifth Class. U.S.N.

Forsyth, James McQueen. Thirty-fifth Class. U.S.N. Captain of the "Indiana."

Fox, Joseph C. Eighty-fourth Class. W. P. U.S.A.

Frailey, William B. H. Forty-sixth Class. N. A. U.S.N.

Francis, Henry. Fortieth Class. U.S.A.
Francks, John S. Thirty-fourth Class. U.S.A.
Freeman, Nathaniel C. Nineteenth Class. U.S.N.
Fritz, Horace. Twenty-sixth Class. U.S.A. Deceased.
Fronefield, Charles. Thirty-third Class. U.S.A.
Fry, William H. Thirty-fifth Class. U.S.A. Lt.-Col. Deceased.
Fulmer, David M. Thirty-third Class. U.S.N. Lieutenant.
Furlong, John W. Eighty-eighth Class. W. P. U.S.A.
Fussell, Linnæus. Thirty-seventh Class. U.S.N.
Garsed, Joshua Simister. Thirtieth Class. U.S.A. Killed at Gettysburg, War of Rebellion. 1st Lieut. 23d Pa. Inf. Vols.
Gaskill, Edwin Allen. Thirty-eighth Class. U.S.N.
Gibson, Charles H. Thirty-first Class. U.S.A. 1st Lieut. W. P.
Gibson, Joseph R. Twenty-eighth Class. U.S.A. Col. Retired.
Gideon, George. Sixth Class. U.S.N. Deceased.
Gihon, Albert L. Fifteenth Class. U.S.N. M.D. Retired.
Gillingham, Frank. Thirty-seventh Class. U.S.A.
Gilroy, John Jay. Forty-eighth Class. U.S.N.
Gimber, Frederick L. Twenty-ninth Class. U.S.A.
Glading, John. Twenty-fourth Class. U.S.N.
Gobrecht, William H. Eighth Class. U.S.A. Surgeon.
Goodman, William E. Twenty-seventh Class. U.S.A. Major.
Gorgas, Albert C. Eighteenth Class. U.S.N.
Grafly, Daniel Webster. Thirty-fourth Class. 1st Asst. Engineer U.S.A.
Grandgent, Louis Hall. First Class. U.S.A. Mexican War. Deceased.
Gravener, Jacob Amos. Forty-sixth Class. U.S.A.
Gray, Joseph R. Taylor. Fortieth Class. Rev. U.S.A.
Greany, Dennis W. Thirty-ninth Class. U.S.N.
Grear, Peter W. Fifth Class. U.S.A.
Greble, Edwin St. John. Seventy-first Class. U.S.A.
Greble, John Trout. Sixteenth Class. W. P. U.S.A. Lieut. Killed at battle of Big Bethel, War of Rebellion. The first regular army officer who fell in the war.
Green, John Pugh. Twenty-sixth Class. Capt. and Asst. Adjt.-Gen. U.S.A.
Greene, Charles S. Ninth Class. U.S.A. Lt.-Col. 61st Pa. Inf.
Grier, Matthew J. Twenty-second Class. U.S.A. Surgeon, M.D., War of Rebellion. Deceased.
Griffin, John A. Twenty-fifth Class. U.S.A.

Griffith, Richard H. Thirty-sixth Class. U.S.A. Deceased.
Griffith, Samuel Henderson. Forty-eighth Class. U.S.N.
Griscom, John S. Twenty-eighth Class. U.S.N. Acting Ensign. Killed on the "Mackinaw," December 25, 1864.
Grugan, Florance W. Thirty-first Class. U.S.A. 1st Lieut. and Adjt. 2d Pa. Heavy Artillery.
Haeseler, Francis Joy. Seventy-first Class. U.S.N. Lieut. on U. S. steamer "Texas" in Spanish War. Died November 20, 1900.
Haines, William C. Eighth Class. U.S.A. Mexican War, War of Rebellion.
Hall, Elisha. Seventh Class. U.S.A. Killed at Salem Heights. War of Rebellion, May 3, 1863. Lt.-Col. 95th Pa. Vols.
Hall, Franklin. Forty-fifth Class. U.S.A.
Hall, Harry. Sixty-sixth Class. N. A. U.S.N.
Hallowell, Francis P. Thirty-fourth Class. 2d Asst. Engineer U.S.N.
Hamilton, George B. F. Forty-first Class. U.S.A. Co. B, 2d Del. Inf. Vols. Died September 17, 1862, from wounds at Antietam.
Harkness, William. Twenty-fifth Class. U.S.A. 22d Pa. Res.
Harmstead, Martin E. Thirteenth Class. U.S.A. Rev. Deceased.
Harres, J. Henry. Seventeenth Class. U.S.A.
Harris, Charles Danenbower. Forty-ninth Class. U.S.A.
Harris, J. Campbell. Thirty-first Class. Capt. Marine Corps, U.S.N.
Harris, Joseph Smith. Twenty-fourth Class. U. S. Coast Survey, U.S.N.
Harrison, William H. Thirty-second Class. U.S.A.
Harrisson, Alexander M. Ninth Class. U. S. Coast Survey. Deceased.
Harvey, John C. Eighteenth Class. U.S.A.
Harwood, Lilburn. Tenth Class. U.S.A.
Hatch, Charles Parker. Twenty-second Class. U.S.A. 1st Lieut. and Adjt. 53d Pa. Inf. Died May 5, 1900.
Hayes, Thomas Henry. Thirty-sixth Class. U.S.A.
Heilman, Horace B. Twenty-second Class. U.S.A.
Helmbold, Alfred. Twenty-second Class. U.S.A.
Henszey, George Carpenter. Thirty-ninth Class. U.S.A.
Hergeisheimer, Edwin. Eighteenth Class. U. S. Coast Survey. Deceased.
Hergesheimer, Joseph Unruh. Fifty-fifth Class. U. S. Coast Survey.
Hewston, John J. Fifth Class. U.S.A. Deceased.

Hickey, John Charles. Forty-fourth Class. U.S.A.
Higgins, Paul Lajus. Thirty-fifth Class. U.S.A.
Hilt, David Brainard. Thirty-sixth Class. U.S.A. 28th Pa. Vols.
Hirsch, Harry J. Eighty-second Class. U.S.A. Capt. 20th U. S. Inf. In Philippines, 1900.
Hirst, Robert L. Seventy-ninth Class. W. P. U.S.A. Lieut.
Hodgson, Benjamin Hubbert. Forty-ninth Class. U.S.A. Deceased.
Hollingsworth, Charles F. Thirty-first Class. U.S.N. 1st Asst. Engineer. Deceased.
Horn, George H. Thirtieth Class. U.S.A.
How, David Flintham. Thirty-ninth Class. U.S.A.
Howard, Daniel Waldo. Thirteenth Class. U.S.A.
Hubeli, Edward W. Thirty-sixth Class. U.S.A. Died from wound received at first battle of Fredericksburg, War of Rebellion.
Huber, Henry H. Second Class. U.S.A. Deceased.
Huey, Samuel Baird. Thirty-third Class. U.S.N.
Hunn, William G. Forty-fifth Class. U.S.A.
Jackson, James. Twentieth Class. U.S.A. Major.
Jackson, John Walker. Third Class. U.S.A. Rev., D.D.
James, Bushrod W. Twenty-ninth Class. U.S.A.
Janeway, John H. Twelfth Class. U.S.A.
Jarden, John S. Fifteenth Class. U.S.A. Deceased. Capt. 112th Pa. Inf. Vols. (2d Pa. Heavy Artillery.) Died November 9, 1863, at Fort Thayer, D. C.
Jenks, John Story. Twenty-seventh Class. U.S.A.
Jewell, Kenneth. First Class. U.S.A.
Johnson, Charles Benjamin. Forty-fourth Class. U.S.A.
Jones, David. Thirty-fifth Class. U.S.N.
Jones, William B. Twenty-fifth Class. U.S.A. 2d Pa. Res. Vols. Missing at White Oak Swamp.
Jones, Zebedee Ring. Thirteenth Class. U.S.A. Deceased.
Justus, James C. Thirty-third Class. U.S.A.
Kates, Horace N. Twenty-fifth Class. U.S.A.
Keeley, Thomas J. Twenty-fifth Class. U.S.A.
Keely, Eschol. Thirty-seventh Class. U.S.A. Sergeant 15th U. S. Inf. Killed at Nashville.
Keen, William W. Twenty-first Class. U.S.A. Asst. Surgeon 5th Mass. Vols., War of Rebellion. Asst. Surg.-Gen. U.S.A.
Kelley, George W. Thirty-sixth Class. Capt. U.S.A.

Kelly, William H. Forty-first Class. U.S.N.
Kensil, Joseph A. Fifteenth Class. U.S.A.
Keyser, Charles P. Forty-first Class. U.S.A. Killed at Gettysburg, War of Rebellion. 2d Lieut. Co. B, 150th Pa. Vols.
Kid, Charleton B. Twenty-fifth Class. U.S.N.
King, William. Twenty-first Class. 2d Asst. Engineer U.S.N.
Kintzle, William Henry. Thirty-eighth Class. U.S.A.
Kirk, Charles Howard. Fortieth Class. Lieut. 15th Pa. Cav., U.S.A.
Kirk, William. Thirty-first Class. Lieut. 6th Pa. Cav., "Rush's Lancers," U.S.A. Mortally wounded at battle of Todd's Tavern, May 7, 1864. Died June 28, 1864.
Kitchen, Theodore. Twenty-fourth Class. U.S.N.
Knight, T. Morris. Thirty-third Class. U.S.A.
Knowles, Oliver Blachly. Thirty-fourth Class. Major U.S.A. Deceased.
Kochersperger, Charles. Fifth Class. U.S.A. Lt.-Col. 71st Pa. Vols. Deceased.
Koehler, Edwin Forrest. Fifteenth Class. U.S.A. Deceased.
Lamb, Daniel Smith. Thirty-fourth Class. M.D. U.S.A.
Lambert, William Harrison. Thirty-fourth Class. Major U.S.A. Medal of Honor by Act of Congress.
Lane, David H. Twenty-ninth Class. U.S.A.
Langer, Philip Joseph. Thirty-seventh Class. U.S.N. Engineer Corps. Deceased.
Latta, James William. Twenty-eighth Class. U.S.A. Capt. 119th Pa. Capt. and Adjt.-Gen. U. S. Vols. Brevet Lt.-Col. U.S.A. Adjt.-Gen. of Penna.
Laws, James. Sixth Class. U.S.N. Surgeon.
Lawson, James S. Sixth Class. U. S. Coast Survey, U.S.N. Deceased.
Lee, James Dennis. Fortieth Class. U. S. Engineer Corps.
Leech, William A. Sixteenth Class. U.S.A. Lt.-Col. 90th Pa. Vols. Deceased.
Le Grand, Joseph A. Thirty-first Class. U.S.A.
Leidy, Philip. Thirty-third Class. U.S.A. Died April 29, 1891.
Leiper, Thomas I. Twentieth Class. U.S.A.
Levis, Richard J. Sixth Class. U.S.A.
Levy, Aaron. Thirty-fifth Class. U.S.A.
Lewis, Thomas Esler. Fortieth Class. U.S.A.
Lindsay, Edwin F. Thirty-fourth Class. U.S.A.
Linnard, Joseph Hamilton. Seventieth Class. U.S.N.

Lister, Charles C. Thirty-seventh Class. U.S.A.
Logo, Benjamin F. Thirty-fifth Class. U.S.A. 119th Pa.
Longacre, Orleans. Thirty-fourth Class. 2d Asst. Engineer U.S.N.
Longwell, Harry Shaner. One hundred and first Class. U.S.A. 1st Pa. Vols., Spanish War.
Loxley, Benjamin Ogden. Thirty-eighth Class. U.S.A.
Lynch, Augustine T. Thirty-fourth Class. U.S.A.
Lynch, Francis A. Thirty-second Class. U.S.A.
Lynch, James C. Twenty-seventh Class. U.S.A. Brevet Brig.-Gen. 106th Pa. Regt., 183d Pa. Regt., etc. Died April 12, 1901.
Lyon, Luther M. Twenty-second Class. U.S.N.
Macfarlane, John James. Forty-second Class. U.S.A.
MacManus, Charles V. Thirty-fourth Class. U.S.A.
MacNutt, Ira. Forty-seventh Class. W. P. U.S.A. Capt.
Macpherson, William. Thirty-first Class. U.S.A.
Magilton, Albert L. Third Class. U.S.A. W. P. Col. 4th Pa. Res. Deceased.
Mallery, Daniel G. First Class. Rev. U.S.A. Deceased.
Manderson, Charles F. Twenty-fifth Class. Brig.-Gen. Vols., U.S.A.
Markley, Alfred C. Thirty-sixth Class. Major 24th Inf., U.S.A. War with Spain and in Philippines.
Marple, Enoch Wright. Thirty-ninth Class. U.S.A.
Mason, Frederick T. Forty-second Class. U.S.N.
May, G. W. Forty-first Class. U.S.A. 8th New York Inf. in Spanish War.
McCleary, Alexander J. Thirty-third Class. U.S.A.
McConnell, Henry. Twenty-seventh Class. Chief Engineer U.S.N.
McCullough, John T. Thirty-fourth Class. U.S.A.
McElhone, James Francis. Thirty-eighth Class. Lt.-Col. U.S.A. Died of wounds received at Gaines's Mill, War of Rebellion.
McGinley, James. Forty-second Class. U.S.A.
McIlvaine, Henry C. Twenty-ninth Class. 1st Asst. Engineer U.S.N. Died October 12, 1900.
McKnight, Harry Clay. Forty-fourth Class. U.S.A.
McLean, John R. Thirty-eighth Class. U.S.N.
McMakin, Lewis M. Twenty-sixth Class. U.S.A.
McMenamin, James J. Thirty-second Class. U.S.A.
McMichael, Walter. Twenty-seventh Class. U.S.A.
McMichael, William. Thirty-second Class. U.S.A.
McMurtrie, Faulkner. Seventeenth Class. U.S.A. Deceased.

McMurtrie, George S. Second Class. U. S. Coast Survey. Deceased.
McMurtrie, Horace. Thirty-second Class. U.S.N.
McMurtrie, Theodore. Nineteenth Class. U.S.A.
McVey, John Snyder. Forty-eighth Class. U.S.A.
Mercer, Bernard. Thirtieth Class. U.S.A.
Merchant, Thomas Edward. Thirty-eighth Class. U.S.A.
Mickley, Joseph Philip. Thirty-ninth Class. U.S.N. Commander.
Miller, Franklin B. Thirty-third Class. U.S.A. Killed at Spottsylvania Court-House, War of Rebellion.
Miller, Joseph S. Thirty-seventh Class. U.S.A. Independent (Hampton's) Battery F, Penna.
Miller, Richard J. Fortieth Class. U.S.A.
Miller, Samuel C. Forty-second Class. U.S.A. Killed at Gettysburg, War of Rebellion. Sergt. Co. E, 121st Pa. Inf. Vols.
Milligan, Robert Wiley. Thirty-ninth Class. U.S.N.
Mindil, George Washington. Thirty-fourth Class. General U.S.A. Medal of Honor by Act of Congress.
Mitchell, George H. Twenty-third Class. U.S.A.
Mitchell, S. B. Wylie. Fourteenth Class. U.S.A. Surgeon 18th Pa. Inf. Lt.-Col 8th Pa. Cav. Deceased.
Monroe, Robert. Sixteenth Class. U.S.A.
Moore, Carlton Ridgway. Forty-second Class. U.S.A.
Moore, J. Ridgway. Thirty-sixth Class. U.S.A. Deceased.
Moorhead, Thomas E. Twenty-seventh Class. U.S.A.
Morehead, Robert R. Third Class. U.S.A. Killed at the battle of Monterey, Mexican War, 1847.
Morgan, George P. Thirty-second Class. U.S.A., 1861-65. 1st Pa. Light Artillery, Capt. of Battery. Wounded three times.
Morgan, Joseph, Jr. Fortieth Class. U.S.N. Engineer Corps.
Morice, William Nelson. One hundred and first Class. U.S.A. Spanish War.
Morrison, James F. Thirty-third Class. U.S.A. Co. K, 2d Pa. Res.
Moss, Henry N. Fortieth Class. W. P. U.S.A.
Moss, Joseph Moree, Jr. Fortieth Class. U.S.A. 2d Lieut. Co. K, 118th Pa. Inf. Vols. Killed at Shepherdstown, Va., September 20, 1862.
Mowrey, George Henry. Thirty-eighth Class. U.S.A.
Munch, Augustus C. F. Thirty-eighth Class. U.S.A. Killed at Antietam, War of Rebellion. Co. I, 4th Pa. Res. Inf. Vols.
Murgatroyd, George S. First Class. U.S.A. Deceased.

Murphy, Arthur E. Seventh Class. U.S.A. Killed in battle, June, 1864.
Murphy, Rufus W. Thirty-fourth Class. U.S.A. Deceased.
Murray, Jacob M. Thirty-sixth Class. U.S.N.
Musgrave, Edward G. Thirty-second Class. U.S.N.
Napheys, Benjamin F. Thirty-eighth Class. U.S.N.
Napheys, George Henry. Thirty-sixth Class. M.D. U.S.A. Asst. Medical Officer on U. S. steamer "Mingo," War of Rebellion.
Neall, William N. Thirty-fourth Class. U.S.A.
Neel, Percy Landreth. Ninety-eighth Class. U.S.N. Asst. Engineer. Spanish War.
Newbold, Henry Austie. Forty-third Class. U.S.A.
Newgarden, George Joseph. Seventy-sixth Class. U.S.A. Capt. and Asst. Surgeon.
Ninesteel, Jacob. Fifteenth Class. U.S.A. Capt. 88th Pa. Inf. Vols.
Noble, William. Thirty-sixth Class. U.S.A. 1st Lieut. and Adjt. 2d Mich. Vols. Killed at Knoxville, War of Rebellion, November 24, 1863.
Nones, William C. Forty-first Class. U.S.A.
Norcross, John E. Thirty-fourth Class. U.S.A.
Norton, Lemuel B. Thirty-third Class. U.S.A.
Nowlen, Garret. Twenty-fourth Class. U.S.A. Deceased.
Oberteuffer, John Henry. Thirty-second Class. U.S.A. War of Rebellion.
O'Brien, Charles Evans. Forty-fifth Class. U.S.A. Deceased.
Odiorne, Henry B. Thirtieth Class. U.S.A. Killed at Fort Fisher, War of Rebellion. Co. D, 97th Pa.
O'Hara, Michael. Twelfth Class. U.S.A.
Omansetter, John H. Tenth Class. U.S.A.
O'Neill, William Anderson. Thirty-ninth Class. U.S.A.
O'Reilly, Robert. Thirty-ninth Class. U.S.A.
Orr, Robert L. Twenty-fifth Class. Col. 61st Pa. Inf., U.S.A.
Ostheim, Louis. Seventy-third Class. U.S.A. W. P. Capt. 1st U.S.A. Artillery. Died April, 1899. Spanish War. Philippines.
Ovenshine, Samuel. Thirty-ninth Class. U.S.A.
Overman, Harry. Thirty-sixth Class. U.S.A. Deceased.
Overman, Lewis Cooper. Thirty-sixth Class. Major U.S.A. Engineer Corps. W. P. Died May 8, 1899, at Nantucket, Mass.
Palmer, William J. Twenty-first Class. U.S.A. Col. 15th Pa. Cav.
Parham, Charles. Eighth Class. U.S.A. Col. 29th Pa. Vols.
Park, Robert J., Jr. Thirty-sixth Class. U.S.A. Died of wounds received at battle of Antietam, War of Rebellion.

Park, William D., Jr. Thirty-fourth Class. Engineer Corps, U.S.N. Deceased.

Parsons, Henry Cooley. Eighteenth Class. U.S.A. Capt. 115th Pa. Vols.

Patterson, James W. Thirty-second Class. U.S.N. 2d Asst. Engineer.

Patton, Edward Wagner. Forty-fourth Class. U.S.N. U.S.A. War of Rebellion.

Peddle, William R. Thirty-fifth Class. U.S.A.

Peele, Charles Edward. Seventy-sixth Class. W. P. U.S.A.

Pelouze, Lewis H. Thirteenth Class. W. P. U.S.A. General. Deceased.

Peltz, Richard. Seventeenth Class. U.S.A.

Perkins, E. Stanley. Forty-second Class. U.S.N.

Peterman, William R. Thirty-second Class. U.S.A.

Pidgeon, David H. Thirty-first Class. U.S.A.

Pile, Charles H. Thirty-first Class. U.S.N.

Pile, Wilson H. Thirty-first Class. U.S.A.

Pleasants, Henry. Eighteenth Class. U.S.A. Lt.-Col. 48th Pa. Vols. Deceased.

Plotts, Reseau B. Twenty-sixth Class. 1st Asst. Engineer. Retired. Lieut. U.S.N.

Plum, Lewis H. Thirteenth Class. U.S.A. Deceased.

Pope, Byron. Thirty-fourth Class. U.S.A.

Potter, Robert B. Sixteenth Class. U.S.A. Lt.-Col. 51st N. Y. Vols. Deceased.

Price, Abel Fitzwalter. Forty-ninth Class. U.S.N.

Pritchett, Joseph H. Forty-seventh Class. U.S.A.

Randal, Edward L. Twenty-first Class. U.S.A.

Randall, Francis Joshua. Twenty-sixth Class. Major 95th Pa. Inf., U.S.A. Deceased October 13, 1896.

Randolph, Wallace F. Thirty-fourth Class. Major U.S.A. Col. 3d Artillery.

Rau, Charles F. Thirty-sixth Class. U.S.A. Killed at battle of Sharpsburg, War of Rebellion.

Rau, John Frederick. Thirty-seventh Class. U.S.A. Killed at Antietam, War of Rebellion.

Read, George Henry. Thirty-eighth Class. U.S.N., Paymaster's Dept.

Reany, James. Thirty-fourth Class. U.S.A.

Reger, George F. Thirty-first Class. U.S.A.

Reichenbach, William C. F. Forty-second Class. U.S.N.

Reichner, Louis. Forty-sixth Class. U.S.N.
Remak, Stanislaus. Forty-third Class. W. P. U.S.A.
Rennard, John Clifford. Eighty-fourth Class. W. P. U.S.A.
Rhoads, Joseph R. Thirty-second Class. U.S.A.
Rich, John Contee. Forty-second Class. N. A. U.S.N.
Ridgely, Thomas H. Twenty-second Class. M.D. U.S.A. Deceased.
Ridgway, John Jacob. Fortieth Class. U.S.A.
Riehl, John S. Eighth Class. U.S.A.
Rizer, Martin. Tenth Class. U.S.A. Deceased.
Robarts, James. Thirty-sixth Class. U.S.N. Killed at the battle of Vicksburg, War of Rebellion.
Robb, Alexander W. Thirteenth Class. U.S.A. Deceased.
Roberts, Hugh O. Twenty-third Class. U.S.A.
Robinson, J. Catherwood. Thirty-seventh Class. U.S.A. 104th Pa. Vols.
Robinson, William T. Twenty-ninth Class. U.S.A. 104th Pa. Vols. Surgeon. Died April 15, 1900.
Rockafellar, Harry. Thirty-third Class. U.S.A. Lt.-Col. 71st N. Y. Regt.
Rodney, Robert Burton. Thirty-fourth Class. U.S.N. Retired.
Roese, Frederick L. Thirty-fifth Class. U.S.A.
Rogers, John I. Thirty-sixth Class. U.S.A. Col. Judge Advocate General of the National Guard of Pa.
Rogers, Theodore C. Thirty-third Class. U.S.A. Killed in the battle of the Wilderness, War of Rebellion.
Roney, Samuel B. Twenty-second Class. U.S.A.
Roney, William J. Thirty-sixth Class. U.S.A. 6th Pa. Cavalry.
Rorer, Thomas J. Thirty-seventh Class. U.S.A. 72d Pa. Vols.
Rose, Francis B. Twenty-second Class. U.S.N.
Rose, John Frailey. Thirty-eighth Class. U.S.A.
Rowand, Thomas G. Thirteenth Class. U.S.A.
Ruoff, John H. Thirty-fifth Class. U.S.A.
Rush, Jesse Ziegler. One hundred and first Class. U.S.A. 1st Regt. Pa. Vol. Inf. Spanish War.
Ruth, Joseph T. W. Second Class. U. S. Coast Survey. Deceased.
Ruth, Melancthon Love. Forty-sixth Class. U.S.N.
Ryan, John J. Fortieth Class. Engineer Corps, U.S.N.
Sacriste, Louis Genotelle. Forty-fourth Class. Adjt. 116th Pa. Vols. U.S.A.
Sailer, Isaac D. Thirty-seventh Class. U.S.A.

Sailer, John. Thirty-second Class. U.S.A.
Sailer, Thaddeus K. Fortieth Class. U.S.N. Deceased.
Samuel, Edward Ingersoll. Forty-fourth Class. U.S.A.
Samuel, William H. Thirtieth Class. Government Reporter, Middle Military Department, 1862-65.
Sanderson, Joseph W. Thirtieth Class. U.S.A.
Sandgrau, Mitchell. Thirty-seventh Class. U.S.A.
Savage, John. First Class. U.S.A. Deceased.
Scattergood, Edward F. Thirty-seventh Class. U.S.N. Acting 1st Asst. Engineer. Died on U. S. steamer "Maratanza," September 30, 1864, off Wilmington, N. C. Buried at sea.
Scheide, Charles E. Thirty-fifth Class. U.S.A.
Schell, Frederick B. Twenty-sixth Class. U.S.A.
Schell, Henry S. Twenty-second Class. U.S.A. Deceased.
Schoales, Joseph D. Twenty-fifth Class. U.S.A.
Schober, Frederick. Thirty-seventh Class. U.S.N. Engineer Corps.
Schoch, Clinton. Twenty-ninth Class. U.S.A.
Schwemmer, William F. Thirty-third Class. U.S.A. Deceased. Lieut. 5th Pa. Cavalry.
Scott, Edwin F. Thirty-second Class. U.S.A.
Sellers, Charles P. Thirtieth Class. U.S.A.
Sellers, Edwin E. Thirty-second Class. U.S.A. Deceased.
Sellers, Gilbert L. Thirty-eighth Class. U.S.A. Corp. Co. E, 72d Pa. Inf. Vols. Died June 12, 1862, of wounds received at Fair Oaks, Va., while on picket duty.
Shaffner, John. Twenty-fourth Class. U.S.A.
Sheridan, Andrew. Thirty-ninth Class. U.S.A.
Sheridan, James B. Twenty-second Class. U.S.A. Deceased.
Sheridan, Owen, Jr. Twenty-fourth Class. U.S.A.
Shields, George W. Thirty-eighth Class. U.S.A. Deceased.
Shower, Edward. Thirty-ninth Class. U.S.A.
Sickel, Horatio Gates. Sixty-third Class. W. P. U.S.A. Capt. 7th Cav.
Simon, Walter Ireton. Thirty-fourth Class. U.S.N. Deceased.
Skinner, Robert W. Forty-third Class. U.S.A.
Slonaker, William H. Twenty-eighth Class. U.S.A. Deceased.
Smith, Horace Weymes. First Class. U.S.A. Deceased.
Smith, H. Hobart. Forty-fifth Class. U.S.A. Capt.
Smith, Wilson F. Thirtieth Class. U.S.A.
Soby, David S. Tenth Class. U.S.A. Killed in battle, August 30, 1862.

Sorber, Frederick A. Forty-first Class. U.S.A.
Stees, Charles J. Twenty-third Class. U.S.A. Major.
Steever, Edgar Zell, Jr. Fifty-first Class. U.S.A.
Stellwagon, Thomas C. Thirty-third Class. U.S.N.
Stevens, Hennell. Fifteenth Class. U.S.A. Capt. Died July 9, 1897, at Brazoria, Tex.
Stevenson, Hugh Sheppard. Ninety-sixth Class. U.S.A. 18th U. S. Regt. Inf. Corporal. 2d Lieut. May, 1901.
Stewart, Reid T. Fiftieth Class. U.S.A. Killed at Fort Laramie in Indian War.
Stork, William L. Thirty-seventh Class. U.S.A. 29th Pa. Vols.
Stratton, Isaiah Harrison. Thirty-third Class. U.S.A. Corp. and Sergt. 15th Pa. Cav. Vols. Died in hospital at Murfreesboro, Tenn., March 16, 1863.
Strong, William Washington. Thirty-ninth Class. U.S.A.
Supplee, Samuel Warren. Thirty-first Class. U.S.A.
Swayne, Franklin. Thirty-fifth Class. U.S.N.
Swire, William H. Thirty-fourth Class. U.S.A. Deceased.
Thatcher, George Baker. Thirty-ninth Class. U.S.A. Adjt. 98th Ill. Inf.
Thatcher, Justus M. Thirtieth Class. U.S.A.
Thayer, Harry G. Twenty-third Class. U.S.N. Asst. Paymaster. Served in Farragut's fleet. Died January 17. 1901.
Thomas, Joseph Horton. Thirty-eighth Class. U.S.N. Engineer Corps.
Thomas, William Paca. Thirty-third Class. U.S.A.
Thompson, Lewis T. Twenty-eighth Class. U.S.A.
Tisdall, William Newlin. Fourteenth Class. U.S.A. Capt. and Quartermaster 1st U. S. Inf. Deceased.
Town, Andrew Jackson. Forty-third Class. Major U.S.A.
Town, Gustavus W. Twenty-ninth Class. General U.S.A. Killed at Salem Heights, War of Rebellion, May 3, 1863. Col. 95th Pa. Inf. Vols.
Town, Thomas H. Third Class. U.S.A. Deceased.
Townsend, Isaac, Jr. Seventeenth Class. U.S.A.
Tracy, Charles W. Twenty-first Class. U.S.N. Lieut.-Commdr. Retired.
Traquair, Horace. Thirty-fourth Class. U.S.A.
Treadway, Harvey B. Fortieth Class. U.S.A.
Trout, George Harry. Seventy-fifth Class. W. P. U.S.A.
Troutman, George H. Thirty-second Class. U.S.A.

Turner Thomas Jefferson. Eleventh Class. U.S.N. Med. Director.
Tweed e, John. Thirty-sixth Class. U.S.A. Major.
Tyndale John. Thirty-fourth Class. U.S.A.
Vance, Charles Andrew. One hundred and third Class. U.S.A. 7th Cav. Spanish War.
Vankirk, Lewis D. Thirty-fourth Class. U.S.A. Deceased.
Vauclain, James L. Twenty-ninth Class. 1st Asst. Engineer U.S.N.
Vaughan, John Alexander. Fortieth Class. N. A. U.S.N.
Vinal, Washington Irving. Forty-fourth Class. U. S. Coast Survey.
Vogdes, William, Jr. Sixteenth Class. U.S.A. Deceased.
Vogdes, W. Wayne. Forty-first Class. U.S.A.
Volkmar, William Jefferson. Forty-sixth Class. W. P. Col. Asst. Adjt.-Gen. U.S.A. Died March 4, 1901.
Wagner, Orlando G. Twenty-second Class. W. P. U.S.A. Killed at Yorktown, War of Rebellion. Brevet Capt.
Walker, James H. Twenty-ninth Class. U.S.A.
Wallwork, Joseph M. Forty-second Class. U.S.A.
Walton, David G. Forty-third Class. U.S.A. Killed at Gettysburg, War of Rebellion. Corp. 106th Pa. Inf. Vols.
Walton, Edwin. Forty-eighth Class. U.S.A.
Walton, Jesse S. Twenty-fifth Class. U.S.A.
Wannemacher, George W. Thirty-first Class. U.S.A.
Warbrick, William. Twenty-ninth Class. U.S.A.
Waterman, Charles Douglass. Thirty-fourth Class. W. P. U.S.A. Deceased.
Watson, Charles. Eighteenth Class. U.S.A.
Watson, Edward H. First Class. U.S.N. Surgeon. Lost at sea.
Watson, John P. Twenty-seventh Class. U.S.A.
Watson, Rudolph J. Thirty-fourth Class. U.S.A. Deceased.
Wayne, William H., Jr. Thirty-first Class. U.S.A. Sergt.-Major 15th Pa. Cav. Died April 12, 1863.
Weaver, David P. Sixth Class. U.S.A. Major.
Weaver, Horace Taylor. Fortieth Class. U.S.A.
Weaver, James H. B. Thirty-eighth Class. N. A. U.S.N.
Welch, Benjamin G. Twenty-sixth Class. U.S.A.
Wells, Edwin. Forty-fifth Class. U.S.N.
Wells, Howard. Forty-ninth Class. U.S.N.
West, Charles Warren. Seventeenth Class. 1st Lieut. and Adjt. 72d Pa. Vols. Capt. U.S.A.
West, Preston C. S. Eighteenth Class. U.S.A.
Whilldin, John L. Twenty-third Class. U.S.A. Deceased.

White, Aaron Clement. Thirty-fifth Class. U.S.A.
Whitecar, William B. Nineteenth Class. U.S.A.
Widdis, Cornelius C. Twenty-seventh Class. U.S.A.
Wiedersheim, John A. Thirty-third Class. U.S.A. Corp. 119th Pa. Vols.
Wiedersheim, Theodore E. Forty-second Class. Col. U.S.A.
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Williams, Arthur Howell. Fifty-fifth Class. U.S.A.
Williams, Frederick. Thirty-first Class. U.S.A.
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Wilson, Walter Gould. Fortieth Class. U.S.A.
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Wolfe, Frank. Twenty-sixth Class. U.S.A. Deceased.
Woodruff, Charles Edward. Seventy-third Class. U.S.A.
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Wright, William B. Fourteenth Class. U.S.A. Captain during War of Rebellion.
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I.—COURSE OF

The enumeration at the tops of the columns indicates the departments of study in the sch

		1.	2.	3.	4.	5.
Freshman Year.	*H.*	The Latin Element of the English Language (5).	Algebra (2); Geometry (2); Arithmetic and Mensuration (3).	Physics (5).	. . . . .	Phonography (5); Bookkeeping (5).
	G.	The Latin Element of the English Language (5).	Algebra (3); Geometry (3).	Anatomy and Physiology (4).	Drawing (3) and Penmanship (1).	Phonography (3); Bookkeeping (4).
Sophomore Year.	*F.*	The Saxon Element of the English Language; Saxon Grammar (5).	Algebra (4); Plane Trigonometry (3).	Anatomy and Physiology (3).	Drawing (2) and Penmanship (1).	Moral Science (3).
	E.	Saxon Gospels (5).	Uranography (3); Spherical Trigonometry (3).	Anatomy and Physiology (3).	Drawing (3) and Penmanship (1).	Moral Science (3).
Junior Year.	*D.*	History of English Language and Literature and Anglo-Saxon (5).	Analytical Geometry (3); Surveying (4).	Anatomy and Physiology (3).	Drawing and Penmanship (1).	Mental Philosophy (3).
	C.	History of English Language and Literature and Anglo-Saxon (5).	Analytical Geometry (3); Surveying (4).	Anatomy and Physiology (4).	Drawing and Penmanship (1).	Mental Philosophy (3).
Senior Year.	*B.*	History of English Language and Literature and Anglo-Saxon (5).	Astronomy (2); Differential Calculus, Spherical Triangles (2).	Medicine and Surgery (4).	Drawing (2) and Penmanship (1).	Political Economy (2).
	A.	History of English Language and Literature and Anglo-Saxon (5).	Astronomy (4); Navigation (4).	Hygiene and Zoölogy (4).	Drawing and Penmanship (1).	Political Economy (3).

DIX G

UDY, 1852 (HART)

e numbers in parenthesis following each course indicate the number of periods of study per week.

6.	7.	8.	9. For Students of Principal Course.	10. For Students of Classical Course.	11. For Students of English or Elementary Course.
osition .	. . . . .	History of England (2).	French (Grammar) (5).	Latin Lessons (5).	Natural Philosophy (5).
osition ; Eng- Grammar .	. . . . .	History of Greece (3).	French (Grammar and Reading) (5).	Latin Lessons (5).	Chemistry (5).
osition .	Natural Philosophy and Chemistry (3).	History of Rome (3); History of Pennsylvania (2).	French (Reading and Grammar) (5).	Cæsar (5).	Chemistry (5).
osition .	Natural Philosophy and Chemistry (3).	Universal History (3); History of Pennsylvania (2).	French (Grammar) (5).	Virgil (5).	Geography of Pennsylvania (5).
osition ; Elocu- n (1); etoric (2).	Natural Philosophy and Chemistry (4).	. . . . .	Spanish (Gil Blas and Grammar) (3); French (2).	Greek (Grammar) (3); Sallust (2).	. . . . .
osition ; Elocu- n (1); etoric (2).	Natural Philosophy and Chemistry (3).	. . . . .	Spanish (Gil Blas and Grammar) (2); French (Scientific Reading) (2).	Greek (Reader) (3); Cicero's Orations (2).	. . . . .
osition ; Elocu- n (1); gic (2).	Natural Philosophy and Chemistry (6).	. . . . .	Spanish (Don Quixote) (3); French (Tupper's Proverbial Philosophy) (2).	Xenophon's Cyropædia (3); Horace (2).	. . . . .
osition ; Elocu- n (1); ic (2).	Natural Philosophy and Chemistry (3).	. . . . .	. . . . .	. . . . .	. . . . .

Index

ACT OF 1818.
Constitutes First School District, 16, 17
Criticism of, 17
ACT OF 1836.
Authorizes Central High School, 23
Effects of, 25–27
ACT OF 1849.
Grants power to confer degrees, 130, 131
ADAMS, JOHN QUINCY.
On astronomical science, 82
ALUMNI.
In journalism, 228–230
Advocate new buildings, 284, 285
Statistics of recent graduates, 288, 289
Organizations of, 290, 291
Work of, 295–310
AMERICAN PHILOSOPHICAL SOCIETY.
Interest in astronomy, 81
ANGELÉ, LEWIS.
Election of, 180
Death of, 201
Sketch of, 319
ANGLO-SAXON.
In Central High School, 131–133
ARNOLD, MICHAEL.
On the Hart Faculty, 122
ASSOCIATED ALUMNI OF THE CENTRAL HIGH SCHOOL.
Organized, 291
Work of, 294, 295
Officers of, 311, 312
ATHLETICS.
Bache on, 248–250
Account of, 250–260
Influence of, 262, 263
BACHE, ALEXANDER DALLAS.
Career of, 43–45
Election of, 45
On the Central High School Faculty, 60
Report of, on organization of Central High School, 61–65
BACHE, ALEXANDER DALLAS.
As Superintendent of Schools, 69
Personality of, 70, 79, 80
Resignation of, 72, 73
On athletics, 248–250
Sketch of, 319
BARTINE, DAVID W.
Election of, 198
Cadet corps and, 213
Sketch of, 320
BARTLETT, JOHN.
Scientific work of, 216
BEALE, JOSEPH B.
Election of, 182
Sketch of, 320
BECKER, GEORGE J.
As a teacher, 58
Election of, 108
Sketch of, 320
BELKNAP, HENRY H.
Election of, 275
Sketch of, 320
BERGER, SAMUEL E.
Election of, 270
Sketch of, 320
BIDDLE, NICHOLAS.
Report of, on education, 13
BOOTH, JAMES C.
Election of, 56
Resignation of, 113
Sketch of, 321
BOYÉ, MARTIN H.
Election of, 113
Resignation of, 179
Sketch of, 321
BRANDT, FRANCIS B.
Election of, 275
Head of Department of Pedagogy, 278
Sketch of, 321
BRECK, SAMUEL.
Work of, for public schools, 19–21
Proposes college for Philadelphia, 31

BRÉGY, FRANÇOIS A.
Election of, 104
As a teacher, 163, 164, 170
Resignation of, 178
Returns to Central High School, 181
Death of, 203
Sketch of, 322
BROOKFIELD, ROBERT M.
Election of, 275
Sketch of, 322
BURDEN, JESSE R.
His amendment to Act of 1836, 24
CAMPBELL, DAVID J.
Election of, 275
Sketch of, 322
CANNON, THOMAS B.
Election of, 114
Sketch of, 322
CARTER, OSCAR C. S.
Election of, 205
Sketch of, 322, 323
CENTRAL HIGH SCHOOL.
Priority in Middle States, 28, 29
First building, 36
Laying of corner-stone, 36–38
The first Faculty, 39–42
Opening of building, 42
Election of Bache, 45
Public opinion and, 123–128
Public examination of, 127, 128
Second building, 139–142
Attacks on, 143–148
Criticisms of, 184
Investigations of, 192–194
Reorganization of Faculty, 194–196
Changes in methods, 264, 265
Expansion of, 274, 275
The new buildings, 282–286
Cost of new buildings, 283
Semi-centennial anniversary of, 291–293
CHRISTINE, FREDERICK F.
Election of, 204
Sketch of, 323
CIVIL WAR.
Central High School and, 189–192
Army and Navy List, 368–386
CLIFF, GEORGE HOWARD.
Election of, 205
Author of History of Central High School, 293
Sketch of, 323
COAST SURVEY, UNITED STATES.
Central High School and, 77, 78
COLLEGE OF PHILADELPHIA.
Suggestion of, 287
COMMENCEMENTS.
The first, 70–72
Controversy over tickets, 185–187
Record of, 350–356
COMMERCE, DEPARTMENT OF.
Organized, 276, 277
CONSTITUTION OF 1776.
Clause on education, 8
CONSTITUTION OF 1790.
On education, 8, 9
COOK, JOEL.
Address to Professor Hart, 152, 153
"Valedictory Manifesto" and, 187
Recitations of, 222
CORLISS, GEORGE.
Election of, 200
Resignation of, 202
Sketch of, 323
COUNCIL, ATHLETIC.
Establishment of, 261
COURSES OF STUDY.
Under Bache, 61–65, 80
Under Hart, 129, 131–136
Investigation of, 145, 146
Under Maguire, 183, 184
Under Riché, 207–211
Under Johnson, 267–269
Organization of departments, 274
Under Thompson, 276, 277
Charts of, Appendix G.
CRESSON, JOHN C.
Election of, 56
Resignation of, 103
Sketch of, 324
DAVIDSON, GEORGE.
On Bache, 66
Reminiscences of, 73–80
Lick Observatory and, 97
DELOUTTE, J. A.
Election of, 50
As a teacher, 50, 51
Sketch of, 324
DISCIPLINE.
Under Bache, 66, 67, 76
Under Hart, 137, 138
Under Maguire, 184, 185, 188, 189
Committee of, 278

Dolley, Charles S.
Election of, 270
Sketch of, 324
Dubois, Howard W.
Election of, 270
Sketch of, 324
Dunlap, Thomas.
On Lancasterianism, 26
Leadership of, in education, 33, 34
Address at Central High School Commencement, 37, 38
Economic Society.
Organized, 246
Edinburgh High School.
Described, 29, 30
Edmonds, Franklin S.
Election of, 275
Sketch of, 325
Exercises, Opening.
Under Hart, 138, 139, 143
Under Riché, 220, 221
Faculty.
Organized, 138
Under Riché, 206, 207
Falkner, Roland P.
Reminiscences of, 223, 224
Faltermayer, Joseph.
Election of, 275
Sketch of, 325
Farr, Chester N., Jr.
Election of, 270
Sketch of, 325
Fisher, James B.
Election of, 119
Sketch of, 325
Fisher, Samuel S.
Election of, 114
Sketch of, 325
Fox, Joseph C.
Election of, 275
Sketch of, 326
Frazer, John F.
Election of, 103
Sketch of, 326
Freeborn, James.
Chairman of Central High School Committee, 194, 197
Frost, John.
Election of, 39
Resignation of, 109
Sketch of, 326
Galbraith, Thomas R.
Election of, 275
Sketch of, 326
George, Henry.
Criticism of Central High School, 158
Gérard, Georges.
Election of, 178
Retirement of, 180
Sketch of, 326
Graham, J. Henry.
Election of, 275
Sketch of, 327
Gray, William F.
Election of, 270
Sketch of, 327
Greene, William H.
Election of, 204
Scientific Microcosm, 215–219
Sketch of, 327
Griscom, John.
On Edinburgh High School, 29, 30
Haney, John L.
Election of, 275
Sketch of, 327
Harley, Lewis R.
Election of, 275
Sketch of, 328
Hart, John S.
On Act of 1836, 27
Career of, 98–101
Election of, as Principal, 102
Activity of, in education, 125
Resignation of, 150
Farewell of, 154, 155
As a teacher, 165, 166, 171
Sketch of, 328
Hartshorne, Henry.
Election of, 181
Resignation of, 199
Sketch of, 328, 329
Haussmann, William H.
Election of, 275
Sketch of, 329
Haverstick, Henry.
Election of, 107
Sketch of, 329
Heany, J. Allen.
Election of, 275
Sketch of, 329
Herrick, Cheesman A.
Election of, 275

HERRICK, CHEESMAN A.
Head of Department of Commerce, 277
Sketch of, 329
HEYER, FREDERICK G.
Election of, 114
Sketch of, 330
HIGH SCHOOL.
Origin of term, 28
HIGH SCHOOL SOCIETY OF THE CITY OF NEW YORK.
Work of, 30
HILL, JAMES M.
Election of, 275
Sketch of, 330
HOLLINGSWORTH, THOMAS G.
On Board of School Controllers, 34
HOLT, JACOB F.
Election of, 199
As a teacher, 224
Sketch of, 330
HOPPER, HARRY SHELMIRE.
On opening exercises, 220
Edits General Catalogue, 293
HOPPER, ZEPHANIAH.
As monitor, 67
Graduation of, 71
Election of, 118
As Acting President, 265, 272
Sketch of, 330
HOUGH, JOHN STOCKTON.
Election of, 200
Sketch of, 331
HOUSTON, EDWIN J.
Election of, 199
As a teacher, 211, 223, 224
Sketch of, 331
HOWARD, DANIEL W.
Election of, 115
As a teacher, 162
Promotion of, 182
Sketch of, 331
HOWES, ARTHUR W.
Election of, 275
Sketch of, 331
HUEY, SAMUEL B.
Chairman of Central High School Committee, 266
JOHNSON, HENRY CLARK.
Election of, 266
Resignation of, 272
Sketch of, 332
JOURNALISM.
In Central High School, 173–175, 228–247
JUSTICE, GEORGE M.
On Board of School Controllers, 34
On Central High School Committee, 36
Interest of, in astronomy, 84, 85
Describes instruments, 88, 89
KELLER, HARRY F.
Election of, 270
Sketch of, 332
KELLEY, WILLIAM D.
On Central High School, 128
KENDALL, E. OTIS.
Election of, 41
On observatory, 86
Work of, 91–93
Resignation of, 119
Sketch of, 332
KERN, JOHN.
Election of, 198
Sketch of, 332
KIRKPATRICK, JAMES A.
Graduation of, 71
Election of, 105
Teacher of Phonography, 134
Resignation of, 200
Sketch of, 333
LABORATORY, CHEMICAL.
Establishment of, 200
Development of, 211
LACY, BENJAMIN F.
Election of, 270
Sketch of, 333
LACY, ERNEST.
Election of, 270
Sketch of, 333
LANCASTER, JOSEPH.
Educational theory of, 14, 15
Work of, in Philadelphia, 17, 18
LANDIS, EDWARD H.
Election of, 275
Sketch of, 333
LEE, FRANCIS H.
Election of, 275
Sketch of, 333
LEFFMANN, HENRY.
Election of, 202
Sketch of, 334
LEIBFREED, EDWIN.
Election of, 275
Sketch of, 334

LIGHTFOOT, THOMAS M.
Election of, 275
Sketch of, 334
LITERARY SOCIETIES.
Work of, 237, 242
LONG, WILLIAM J.
Election of, 275
Sketch of, 334
LOOMIS, ELIAS.
On observatory, 90–92
LUJEANE, ROMAIN.
Election of, 179
Sketch of, 335
LYND, JAMES.
Election of, 114
Sketch of, 335
MAAS, PHILIP.
Election of, 275
Sketch of, 335
MACNEILL, ALEXANDER J.
Election of, 116
Resignation of, 182
Young Men's Christian Association and, 187
Sketch of, 335
MAGUIRE, NICHOLAS H.
As Principal, 171
Election of, 176
On Civil War, 191, 192
Retirement of, 194
Sketch of, 336
MANDERSON, CHARLES F.
Reminiscences of Central High School, 159, 160
MANUAL LABOR ACADEMY.
Established, 32, 33
MANUAL TRAINING.
Central High School and, 224, 225
MASON, WILLIAM A.
Election of, 266
Sketch of, 336
MAURICE, BERNARD.
Election of, 270
Sketch of, 336
MCCLUNE, JAMES.
Work of, in observatory, 95, 96
Election of, 120
Resignation of, 202
Sketch of, 336
MCINTIRE, HENRY B.
Election of, 275
Sketch of, 337
MCMICHAEL, MORTON.
On Board of School Controllers, 34
Address of, at opening of second building, 141
MCMURTRIE, HENRY.
Election of, 47
As a teacher, 48–50, 162
Resignation of, 180
Sketch of, 337
MECUTCHEN, SAMUEL.
Graduation of, 71
Election of, 202
Resignation of, 205
Sketch of, 337
MEEKS, WILLIAM NEWTON.
Death of, 203
Sketch of, 337
MILLER, JOHN M.
Election of, 266
Sketch of, 337
MITCHELL, BENJAMIN W.
Election of, 275
Sketch of, 338
MODEL SCHOOL.
Established, 17
MOFFATT, JAMES H. F.
Election of, 275
Sketch of, 338
MORRIS, JOHN S.
Election of, 275
Sketch of, 338
MORRISON, ANDREW J.
Election of, 205
Sketch of, 338
NEEL, PERCY LANDRETH.
Election of, 275
Sketch of, 338
NEUFELD, JULIUS L.
Election of, 275
Sketch of, 338
NEWTON, JOHN S.
Election of, 200
Sketch of, 339
NORRIS, ISAAC.
Election of, 198
Resignation of, 202
Sketch of, 339
NUSBAUM, LOUIS.
On School of Pedagogy, 270
Election of, 275
Sketch of, 339

OBSERVATORY, ASTRONOMICAL.
Bache on, 45
Origin of, 83, 84
Construction of, 85, 86
Description of instruments, 88, 89.
Cost of, 90
In second building, 95, 142
OBSERVATORY, MAGNETIC.
Davidson and, 76, 77, 79
Construction of, 93, 94
Work at, 94, 95
OBSERVATORY, PHILADELPHIA.
Establishment of, 97
PARKER, ANDREW J.
Scientific work of, 217
PATTEN, HENRY W.
Election of, 275
Sketch of, 339
PAWLING, JESSE, JR.
Election of, 275
Sketch of, 339
PEALE, REMBRANDT.
Election of, 51
As a teacher, 52
Resignation of, 107
Ideals of, 108
Sketch of, 340
PEDAGOGY, SCHOOL OF.
Established, 269
Record of, 270
Expansion of, 278
PENNSYLVANIA SOCIETY FOR THE PROMOTION OF PUBLIC ECONOMY, THE.
Established, 13
PHILADELPHIA SOCIETY FOR THE ESTABLISHMENT AND SUPPORT OF CHARITY SCHOOLS, THE.
Established, 11, 12
PHONOGRAPHY.
In Central High School, 133–136
PICKERING, TIMOTHY.
Work of, for public schools, 8, 9
PLITT, GEORGE L.
Election of, 275
Sketch of, 340
POLK, JAMES K.
Inspected Central High School, 124
RAND, B. HOWARD.
Election of, 179
Resignation of, 183
Sketch of, 340
REED, ALFRED Z.
Election of, 275
Sketch of, 340
RHOADS, JAMES.
Election of, 109
As a teacher, 110–113, 162, 163, 170
Resignation of, 202
Sketch of, 341
RICHÉ, GEORGE INMAN.
Career of, 195–197
Inauguration of, 198
Night schools and, 224
Resignation of, 226, 227
Sketch of, 341
RING, JACOB G. H., JR.
Election of, 180
Promotion of, 182
Sketch of, 341
ROESE, FREDERICK A.
Election of, 115
As a teacher, 164
Sketch of, 341
RORER, JONATHAN T., JR.
Election of, 275
Sketch of, 341
SANDERSON, JOHN.
Election of, 53
As a teacher, 54, 55
Death of, 106
Sketch of, 342
SAYRE, WILLIAM L.
Election of, 266
Sketch of, 342
SCHELL, HENRY S.
Election of, 119
Sketch of, 342
SCHNABLE, ELLIS A.
Election of, 270
Sketch of, 342
SCHOCK, GEORGE W.
Election of, 202
Sketch of, 342
SCHWARTZ, GEORGE W.
Election of, 275
Sketch of, 343
SCIENTIFIC MICROCOSM.
Account of, 215–219
SHAW, OLIVER A.
Election of, 55
Resignation of, 56
Sketch of, 343

SHELL, J. KINZER.
On athletics, 252–256
SMITH, ELVIN K.
Election of, 105
Sketch of, 343
SMITH, T. GUILFORD.
Reminiscences of Central High School, 160–168
SMYTH, ALBERT H.
On teaching of English, 208–210
Election of, 266
Sketch of, 343
SNYDER, MONROE B.
Work of, in observatory, 96
Election of, 201
Sketch of, 343, 344
SOCIETY FOR THE PROMOTION OF PUBLIC SCHOOLS, THE.
Established, 18
SPAETH, J. DUNCAN.
Election of, 275
Sketch of, 344
STAR SIGNALS.
Experiments in, 92, 93
STEPHENS, LEMUEL.
Election of, 183
Sketch of, 344
STEVENS, THADDEUS.
Work of, for education, 22
STRAUBE, MAX.
Election of, 201
Sketch of, 344
STROCK, DANIEL.
Election of, 114
Sketch of, 344
STUART, GEORGE.
Election of, 116, 117
Sketch of, 345
STUDENTS.
Life of, 213–215.
Declamation contests of, 233–235
Literary Societies, 237
Athletics, 248–263
Columbus Day, 270
Expansion of interests, 271, 278–280
SURPLUS REVENUE.
Used for schools, 34, 35
TAYLOR, C. CATHCART.
On opening exercises, 221
TAYLOR, FRANKLIN.
Election of, 203
As a teacher, 210, 223
TAYLOR, FRANKLIN.
As President, 265
Sketch of, 345
The High School Journal.
Account of, 231–235
The Mirror.
Influence of, 230
Founding of, 242–245
THOMPSON, ROBERT ELLIS.
Election of, 272
Inauguration of, 273
Sketch of, 345
THOMSON, ELIHU.
Election of, 201
Promotion of, 202
Resignation of, 204
Reminiscences of, 211–213
Scientific Microcosm, 215–219
Sketch of, 346
THORPE, FRANCIS NEWTON.
Work of, 265
Sketch of, 346
TODD, WILLIAM CROZIER.
Sketch of, 346
TOWNSEND, GEORGE ALFRED.
Poem on Professor Rhoads, 110, 111
Farewell to Professor Hart, 151
Reminiscences of, 169–175
Recitations of, 222
UNIVERSITY OF PENNSYLVANIA.
Number of graduates from college, 46
Central High School and, 166
Scholarships in, 225
VALEDICTORY MANIFESTO.
Story of, 185–187
VAUX, ROBERTS.
Report of, on education, 14
President of Board of School Controllers, 16, 18
VOGDES, EDWARD W.
Election of, 119
Transfer of, 204
Sketch of, 346
VOGDES, WILLIAM.
Election of, 41
Retirement of, 180
Sketch of, 347
WAHL, WILLIAM H.
Work of, 206
Sketch of, 347

WALKER, J. CHARLES.
Election of, 275
Sketch of, 347
WALKER, SEARS C.
Interest of, in observatory, 86, 87
Work of, 92
WALLISER, EMILE.
Election of, 275
Sketch of, 347
WEATHERLY, ULYSSES G.
Sketch of, 347, 348
WEINRICH, WILLIAM, JR.
Election of, 275
Sketch of, 348
WHARTON, GEORGE M.
Chairman of Central High School Committee, 35
WHARTON, JOSEPH.
Election of, 41
Sketch of, 348
WICKERSHAM, JAMES P.
On the fight for free schools, 10, 11
On Central High School, 124
WILLIAMS, WILLIAM H.
Election of, 121
Sketch of, 348
WILLIS, HENRY.
Election of, 266
Sketch of, 348
WILSON, JOSEPH W.
Election of, 182
Death of, 203
As a teacher, 209
Sketch of, 348
WINES, ENOCH C.
Election of, 40
Resignation of, 55
Sketch of, 349
WOLF, GEORGE.
Work of, for education, 19, 21

THE END

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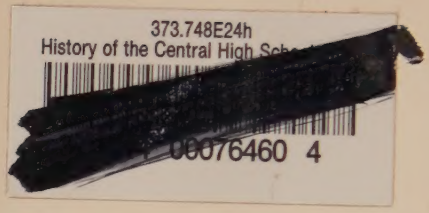

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